

value brands

make Farnell element14 your choice for top quality products at great prices

EXCLUSIVE OFFERS ON

TEST EQUIPMENT

3-Year Warranties on
key test equipment!

TOOLS

20% off selected soldering
station kit and DMM

SOLDERING STATIONS

20% Savings on
exclusive 8pc kits!

PASSIVES

Save up to **50%** on
Full reel Passives

Great Value Development,
Production and
Maintenance products



element14

uk.farnell.com

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High service no matter how you place your order

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ADDRESS

Farnell element14, Sales Department, Canal Road,
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THE FARNELL ELEMENT14 GUARANTEE²

If you're not 100% satisfied with your purchased products, return them within 21 days in the original packaging to: Farnell element14 Returns Dept, Farnell International Distribution Centre, Castleton Road, Leeds, LS12 2EN



1. Not available in all areas of the country. Contact Farnell Sales for details.
2. Excludes software, specially constructed items and products containing hazardous substances.
Batteries: Producer Registration Number: BPRND563. Producer Registration Number: WEE/PA/004672.

multicomp

TENMA

pro-POWER

DURATOOL

Introducing our Great Value brands, a fantastic range of affordable components, tools and equipment to suit all your needs.

As a valued Farnell element14 customer we are delighted to bring you a selection of offers from our value brands including Tenma, Multicomp and Duratool.

We have worked with our product teams not only to bring you a special range of offers, but exciting new products, all great quality at unbeatable prices...

uk.farnell.com

Save upto 50% on multicomp full reel thick film chip resistors!!!!

- Small size and light weight
- Suitable for both wave and reflow soldering
- Reducing your assembly costs

Offer available whilst stocks last.

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Tenma is a great quality brand of professional Test & Measurement Equipment for field and bench applications, representing excellent value for money. Our range includes Oscilloscopes, signal generators, spectrum analysers, and much more.

For more information please visit uk.farnell.com/tenma

Palm Size Digital Multimeters

72-7770

TENMA

**BEST
SELLER**



Autorange meter features a wide range of measurement capabilities. Ergonomically designed to easily fit in the palm of your hand. 1999 count display measures AC/DC voltage and DC current, ohms and diode check.

- 1/2" high LCD digits
- Continuity buzzer
- Diode test
- Data hold
- Backlit LCD display
- Square wave output
- Protective holster
- Includes test leads, standard 9V battery and owners manual
- Meets 600V CATI standards

H=137, W=76, D=35mm

	Range	Accuracy
DC Voltage	200mV, 2V, 20V, 200V, 500V	±(0.5%+2)
AC Voltage	200V, 500V	±(1.2%+10)
DC Current	2000µA, 20mA, 200mA, 10A	±(1%+2)
Resistance	200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 200MΩ	±(0.08%+2)
Input Impedance	10MΩ	10MΩ

685378

Mfrs. List No.	Order Code	1+	5+
72-7770	743-0566	8.12	6.67
Price Each			
Standard Calibration Charge	S C4	34.00	
UKAS Calibration Charge	N C4	60.22	

Digital Multimeter

TENMA



- 1999 digit display
- AC/DC voltage measurement
- AC/DC current measurement
- Resistance measurement
- Capacitance measurement
- Temperature measurement (°F only)
- Frequency measurement
- Diode measurement
- Continuity buzzer
- Meets the IEC1010 CAT II 600V safety standard
- 2 Year manufacturers warranty

Supplied with: test lead, battery, manual, point contact temperature probe, holster.

Description	Mfrs. List No.	Order Code	1+	+
Digital Multimeter	72-7925	918-3663	26.63	--
Price Each				
Standard Calibration Charge	S C3		28.30	
UKAS Calibration Charge	N C3		59.76	

TRMS USB Digital Multimeters

TENMA



- 100KHz bandwidth
- Auto ranging
- True RMS
- USB interface
- Diode check
- 2 years manufacturers warranty

Kit Contents: Multimeter, battery, test lead, alligator clip, test clip, USB interface cable, PC software CD, carrying bag, point contact temperature probe and english manual.

	72-7730A	72-7732A	72-9380A
Measurement Ranges			
AC Voltage	2V, 20V, 200V, 1kV	4V, 40V, 400V, 1kV	
DC Voltage	200mV, 2V, 20V, 200V, 1kV	400mV, 4V, 40V, 400V, 1kV	
AC Current	200µA to 10A	400µA, 4000µA, 40mA, 400mA, 10A	
DC Current	200µA to 10A	400µA, 4000µA, 40mA, 400mA, 10A	
Resistance	200ohm, 2kohm, 20kohm, 200kohm, 2Mohm, 20Mohm	400ohm, 4kohm, 40kohm, 400kohm, 4Mohm, 40Mohm	
Capacitance	20nF, 200nF, 2µF, 20µF, 200µF, 2mF, 20mF	40nF, 4µF, 40µF, 400µF, 4mF, 40mF	
Frequency	20Hz to 200Hz	40Hz to 400Hz	
Temperature	-40°C to +1000°C		
Power			2500W

General
Display Count
LCD Size
Dimensions
Weight

19999

73 x 50mm
200 x 93 x 40mm
384g

39999

685380

Mfrs. List No.	Order Code	Price Each
72-7730A	210-0035	85.05
72-7732A	210-0036	124.36
72-9380A	210-0037	177.34

Clamp Meter with Temperature

72-7222

TENMA

**BEST
SELLER**



Perfect for general purpose applications including HVAC and appliance repair, this compact clamp meter measures AC/DC voltage, AC current, resistance and temperature.

- 1999 count autoranging display
- 10MΩ input impedance
- Diode test and Continuity buzzer
- Max hold and Data hold
- Sleep mode and Low battery indicator
- Powered from 2x AAA batteries (included)
- Supplied with zipper case, test leads, owners manual
- 2 Year manufacturers warranty

	Range	Accuracy
DC Voltage	200mV to 600V	± 0.8% + 1 Digit
AC Voltage	2V, 20V, 200V, 600V	± (1.2% + 5d)
AC Current		± (1.5% + 5d)
Resistance	200ohm to 20Mohm	± (1.0% + 2d)
Temperature	-40°C to +1000°C	± (1.0% + 3d)

Mfrs. List No.	Order Code	1+	+
72-7222	128-3639	16.09	--
Price Each			
Standard Calibration Charge	S C4	34.00	
UKAS Calibration Charge	N C4	60.22	

SAVE 20%

on this Tenma 3999 point handheld multipurpose DMM.

Order code 205-9980

- Continuity test (with Buzzer)
- Data hold function
- Diode test
- Low battery indicator



Digital Clamp Meters

72-94XX

TENMA

NEW



- Auto ranging
- Data hold
- True RMS (72-9485 and 72-9490 only)
- USB interface (72-9490 only)
- Single and 3 phase (72-9490 only)
- 2 Year manufacturers warranty

Kit Contents 72-9480: Multimeter, test lead, battery, manual, temperature probe and carry bag.

Kit Contents 72-9485: Multimeter, test lead, battery, manual and tool box.

Kit Contents 72-9490: Multimeter, test lead, battery, manual, alligator clips, USB interface cable, software and tool box.

	72-9480	72-9485	72-9490
Measurement Range			
AC Voltage	4V, 40V, 400V, 600V	400mV, 4V, 40V, 400V, 600V	15V, 100V, 300V, 600V
DC Voltage	400mV, 4V, 40V, 400V, 600V	400mV, 4V, 40V, 400V, 600V	--
AC Current	--	40A, 1kA	40A, 100A, 400A, 1kA
DC Current	40A, 600A	40A, 1kA	--
Capacitance	4nF, 40nF, 400nF, 4µF, 40µF, 100µF	--	--

	72-9355	72-9360	72-9365	
Interface		Colour and Mono display selectable		
Power		Battery or Power Adaptor		
Battery Life		3 Hours		
AC Current		6mA, 60mA, 600mA, 6A		
DC Current		6mA, 60mA, 600mA, 6A		
AC Voltage		600mV, 6V, 60V, 600V, 700V		
DC Voltage		600mV, 6V, 60V, 600V, 1000V		
Capacitance		6nF, 6mF, 60nF, 600nF, 6μF, 60μF, 600μF		
Resistance		600Ω, 6MΩ, 60MΩ, 6kΩ, 60kΩ, 600kΩ		
Display Count		5999		
Weight		1.8kg		
Dimensions		268 x 168 x 60mm		685386
Mfrs.		Calibration		Price Each
List No.	Bandwidth	Options	Order Code	1+
72-9355	60MHz	(SC16/NC16)	206-1825	599.00
72-9360	100MHz	(SC19/NC19)	206-1826	899.00
72-9365	200MHz	(SC19/NC19)	206-1827	999.00
				Price Each
Standard Calibration Charge		S	C 16	69.68
Standard Calibration Charge		S	C 19	94.25
UKAS Calibration Charge		N	C 16	97.45
UKAS Calibration Charge		N	C 19	143.90

Amazing Offer!!!

Buy a Tenma Oscilloscope DSO and get a **FREE USB Digital Multimeter!!**

Order code 208-2249 - see online for full specifications.



USB DSO Oscilloscopes

60MHz - 2 or 4-channels



- 60MHz bandwidth
- EXT trigger
- 200MSa/s real-time sampling rate
- 10k to 16M memory depth per Channel
- Arbitrary Waveform Generator
- 25MHz arbitrary waveform output, (sine wave can deliver up to 75MHz) 200MSa/s DDS, 12bits of vertical resolution
- Frequency Counter, FFT spectrum analysis
- 8 to 36V input voltage suitable for vehicle power test
- USB 2.0 interface plug and play
- Multi-language interface
- More than 20 kinds of automatic measurement function, PASS/FAIL Check function, is suitable for engineering application
- Excellent industrial design, similar interface with bench oscilloscope

	72-10155	72-10160
Vertical		
No. of Channels	4	2
Bandwidth		60MHz
Rise Time		5.8ns
Impedance		1MΩ
Input Sensitivity		10mV/div to 5V/div
Coupling		AC, DC, GND
Vertical Resolution		8 bit
Memory Depth		10K to 16M per Channel
Horizontal		
Real Time Sampling Rate		200MS/s
Time Base Precision		5ns/div to 1000s/div
Trigger		
Source		CH1, CH2, CH3, CH4, EXT
Mode		Edge, Pulse, Video, Alternative
Measurement		
Voltage Measurement	Vpp, Vamp, Vmax, Vmin, Vtop, Vmid, Vbase, Vavg, Vrms, Vcrms, Preshoot, Overshoot	
Time Measurement	Frequency, Period, Rise Time, Fall Time, Positive Width, Negative Width, Duty Cycle	
Waveform Signal Process	+, -, ×, ÷, FFT, Invert	
Voltage Range	10mV to 5V, 100mV to 50V, 1V to 500V, 10V to 5kV, 100V to 50kV, 200mV to 100V	
FFT	Rectangular, Hanning, Hamming, Blackman Window	
Math	Addition, subtraction, multiplication, division	
Arbitrary Wave Form		
Waveform Frequency		25MHz
DAC		2K to 200MHz adjustable
Vertical Resolution		12 bit
Impedance		50
General		
Interface		USB 2.0
Input Voltage		8V to 36V
Dimensions		255x190x45mm
Weight		1kg
		685387
Kit Contents: Oscilloscope, Software CD, Probes, Carry Case, USB lead, Power Adapter and BNC Lead.		

Mfrs. List No.	No. of Channels	Order Code	Price Each
72-10177	4 Analogue	214-6567	418.95
72-10179	2 Analogue	214-6568	271.95

Up to 3 year warranty now available on Test Instruments.

Quality and value from a brand you can TRUST.

Bench Power Supply

Single Output



- Complete digital control
- Single output
- 10mV / 1mA resolution
- Low noise and ripple
- CV / CC constant voltage and constant current mode
- OCP and OVP settings, constant protection mode
- 5 sets of parameters can be stored and recalled
- Output switch control
- Power-off memory function
- Keyboard lock function

NEW

BEST SELLER

Voltage Range	0V to 30V	Operating Temperature	0°C to 40°C	Weight	3.5kg
Current Range	0A to 3A	Dimensions	110 x 156 x 260mm		685388

Kit Contents: Power supply, User manual, UK power cord and Euro power cord.

Mfrs. List No.	Order Code	Price Each
72-10480	225-1946	53.00

Tenma 3MHz Function Generator with LED display

UNBELIEVABLE VALUE at £145/€167

Order code 507-4502 - see online for full specifications.

DC Power Supplies



- Low ripple & noise linear regulated bench power supplies
 - 2 x 3 digit LED's for voltage & current indication
 - Constant voltage & constant current modes
 - Series or parallel operation
 - Test leads, Manua (UK only), UK & Euro mains included
 - 2 years manufacturers warranty
- 210mm x 152mm x 305mm

	72-8690	72-8695	72-8700
Output Voltage	Ch1, Ch2 0-32V	0-32V 5V	0-32V
Output Current	Ch1, Ch2 0-1A	0-3A 2A	0-5A
Overload Effect	CV ≤ 1 x 10 ⁻⁴ + 2mV, CC ≤ 2mA		
Ripple & Noise	CV ≤ 1mVrms, CC ≤ 1mArms		
Regulation	CV -20mV (Typical Value), CC -50mV (Typical Value)		
Tracking Error	5 x 10 ⁻³ + 2mV		
Mfrs			685389
List No.	Order Code		Price Each
72-8690	183-6056		131.06
72-8695	183-6057		139.42
72-8700	183-6058		172.88
			Price Each
Standard Calibration Charge	S	C 5	39.00
UKAS Calibration Charge	N	C 5	63.03

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Reworking Station and Tools Bundle Kit



TENMA™

Save up to
20%
on complete bundle price.

NEW

- Featuring eight soldering/rework bestselling products
- Best value: save between 15 and 20%* on total price!
- Including TENMA Soldering and Rework Station with dual LCD displays allowing soldering and hot-air rework

In addition to the dual soldering station, the following articles are included:

- A set with the 5 most used antimagnetic stainless steel precision tweezers
- A 5-piece pliers/cutters set with a cutter and four pliers (flat, bent, round and long nose)
- A "third hand" clamp tool with integrated magnifier
- A compact and robust antistatic desoldering gun, rugged metal construction
- A low abrasive brass wool tip cleaner, helping extending soldering tip life
- A 2.6mm x 2m desoldering braid in an ergonomic and antistatic enclosure
- A useful track cutting tool for breaking copper tracks on stripboards

685395

*depending on currency

Mfrs.	List No.	Order Code	Price Each
	23456849	234-5695	165.00

Soldering Station



- Antistatic safety
- Computerized temperature correction to calibrate the temperature difference between the soldering tip and display temperature
- Detachable iron with pencil-style tip
- LED digital display
- Ideal for workshops
- Ideal for lead-free solder, rosin-core, lead-based, silver-bearing or any other
- Available either with European or UK power cord

TENMA™

NEW

Supply Voltage	220V	Output Voltage	24V
Power	60W	Temperature Stability	±1°C (Static)
Temperature Range	+150°C to +450°C	Display	LCD

649040

Mfrs.	List No.	Order Code	1+	5+	10+
	AT60D-EU	207-5392	53.32	51.69	50.05
	AT60D-UK	207-5393	49.00	42.00	39.00

Replacement Soldering Iron					
	AT907-60D	225-4041	11.95	11.60	10.75

Replacement Heating Element					
	CBB018722	211-3923	7.24	6.80	6.48

Soldering Station



- Antistatic safety
- Three programmable preset temperature buttons
- Precise temperature control and computerized temperature calibration
- Two-core heating element
- LCD display
- °C/°F temperature
- Available either with European or UK power cord

TENMA™

NEW

Supply Voltage	220V	Output Voltage	28V
Power	60W	Temperature Stability	±1°C (Static)
Temperature Range	+150°C to +450°C	Display	LCD

685391

Kit Contents: Power Unit, Soldering Iron, Iron Holder, 0.5mm Conical tip, Sponge, Power Cord and Manual.

Mfrs.	List No.	Order Code	1+	5+	10+
	21-10115 UK	206-4549	36.00	31.00	29.00
	21-10115 EU	206-2627	40.14	38.93	37.77

Replacement Soldering Iron					
	AT907-938D	225-4040	11.95	11.60	10.75

Replacement Heating Element					
	CBB018722	211-3923	7.24	6.80	6.48

Soldering Station



- Antistatic safety
- 3 temperature presets for frequently used temperatures
- Detachable iron with pencil-style tip
- Includes cradle stand
- Clear LED digital display, interchangeable between Fahrenheit and Celsius
- Ideal for workshops, onfield soldering jobs

TENMA™

NEW

- Display shows temperature setting and actual temperature
- Ideal for lead-free solder, rosin-core, lead-based, silver-bearing or any other
- Available either with European or UK power cord

Supply Voltage	220V	Output Voltage	26V
Power	60W	Temperature Stability	±1°C (Static)
Temperature Range	+150°C to +450°C	Display	LCD

685392

Mfrs.	List No.	Order Code	Price Each
	21-10120 UK	206-4550	44.95 42.95 40.95

Replacement Soldering Iron			
	AT907-201D	225-4042	11.95 11.60 10.75

Hot Air Rework Station



- Closed loop control of sensor, accurate and stable temperature, which can safely desolder the temperature-sensitive components, such as QFP, PLCC, SOP, BGA and so on
- Intelligent cooling system, Delay blast after operation, automatic power off when air temperature is less than 100°C
- Powerful heating element allowing short heating time, good welding performances at constant or adjustable temperature

TENMA™

NEW

BEST
SELLER

- High quality air pump for low noise and vibration levels
- Anti-Static design to avoid bringing damage to PCB board due to static and creepage
- Available either with European or UK power cord

Supply Voltage	220V	Air Pump	Diaphragm
Power	560W	Output Voltage	187 x 135 x 245mm
Temperature Range	+100°C to +480°C	Weight	4.5g
Volume	23/min		

685393

Mfrs.	List No.	Order Code	1+	5+	10+
	21-10125 UK	206-4551	95.00	89.00	--
	21-10125 EU	206-2632	111.52	108.18	104.93

Replacement Heating Element					
	CBB020837	211-3924	9.52	8.99	8.60

SMD Rework Station



- Dual LCD screen immediately displays working conditions and sets of parameters
- Rapid temperature rise
- Convertible temperature units °C/°F
- Cold air and stopping heating
- Hot air gun is compatible with various kinds of nozzles

TENMA™

NEW

- Sleep mode, automatic switch-off for energy saving
- Keys for temperature and air flow adjustment placed right on the handle
- Three groups of stored data facilitate usage
- Temperature compensation ensures stable temperature state
- Malfunction alert (displaying H-E for heating elements and S-E for sensor)
- Delivered with both European and UK power cord

SPECIAL
OFFER*
*While Stock Lasts

Supply Voltage	220V	Temperature Range	Hot Air Gun: +100°C to +500°C
Power	Hot Air Gun: 800W Pump: 40W Soldering Iron: 50W	Air Volume	Soldering Iron: +200°C to +480°C 20-100% from max.

685394

Mfrs.	List No.	Order Code	1+	5+	10+
	21-10130 UK + EU	206-2633	128.27	124.43	120.69

Replacement Soldering Iron					
	AT907-936B	225-4043	8.95	8.40	7.95

Replacement Soldering Heating Element					
	CBB019822	211-3925	5.33	5.01	4.79

Replacement Desoldering Heating Element					
	CBB020840	211-3926	13.39	12.57	11.92

SMD Rework Station



- Micro processor-controlled ESD safe unit
- Fast heating response
- Easy-to-adjust temperature and airflow control with digital display
- Built-in temperature sensor that aids in providing stable (temperature) measurements



- Built-in thermal protector
- Wide range of operating temperature and airflow level selection
- Integrated airflow gauge for precise airflow level adjustment
- Unique sleep mode with timer functionality
- Automatic cooling functionality for safety and added protection
- Compatibility with various types of air nozzles to meet different repairing requirements

Supply voltage 110V / 220V ac Air capacity 23l/min max.
Power consumption 500W Dimensions 188 x 127 x 244mm
Temperature range 100°C to 480°C Weight 3.8kg

Kit Contents: Station, Hot air gun holder, IC popper, UK and Euro power cord, Vacuum suction pen, 4 piece air nozzles and Instruction manual.




685396

Mfrs.		Price Each		
List No.	Order Code	1+	5+	10+
SS-952BC-F	231-1402	169.00	159.00	149.00

Nozzles



685399

	Mftrs.	Dimensions		
	List No.	A	B	Order Code
General Purpose Nozzles				
	21-10160	2.5mm		206-2646
	21-10168	4.4mm		206-2650
SOP Packages (Dual)				
	21-10170	7.6mm	12.7mm	206-2651
	21-10172	11.7mm	21mm	206-2652
	21-10174	8mm	11.7mm	206-2654
	21-10176	4.8mm	10mm	206-2655
	21-10178	5.7mm	15mm	206-2656
	21-10180	7.2mm	16mm	206-2657
QFP Packages (Quad)				
	21-10162	10.2mm	10.2mm	206-2647
	21-10164	15.2mm	15.2mm	206-2648
	21-10166	28.2mm	28.2mm	206-2649

Mfrs.		Price Each		
List No.	Order Code	1+	5+	+
21-10160	206-2646	2.85	2.77	--
21-10162	206-2647	5.56	5.41	--
21-10164	206-2648	5.56	5.41	--
21-10166	206-2649	12.52	12.14	--
21-10168	206-2650	2.85	2.77	--
21-10170	206-2651	2.85	2.77	--
21-10172	206-2652	15.35	14.90	--
21-10174	206-2654	13.87	13.46	--
21-10176	206-2655	13.87	13.46	--
21-10178	206-2656	13.87	13.46	--
21-10180	206-2657	13.87	13.46	--

Hot Air and Preheating Rework Station



- Quick Heating, up to 350°C only in 10 seconds
- Temperature sensor keeps the output temperature stable
- Optional cool flow can preheat and cool chip
- Working with AT reworking station to deal with BGA and chip IC



- Smart and Compact design and appearance, easy to carry
- Automatic temperature control, Can work continuously working for long hours, not affecting the function of the device and the temperature of panel won't exceed the standard temperature
- Available either with European or UK power cord

Supply Voltage	220V	Volume	0.18m³/min
Power	540W	Output Voltage	170 x 55 x 140mm
Temperature Range	+100°C to +350°C	Weight	1.1kg
Mfrs.			
		Price Each	
List No.	Order Code	1+	5+
21-10135 UK	206-4552	36.00	31.00
21-10135 EU	206-2634	40.14	38.93
Replacement Heating Element			
CBB022791	211-3927	9.52	8.99

685397

Soldering Tips



685398

- Supplied in packs of 10

Mfrs. List No.		Tip Size	Tip Style	Order Code
21-10140		0.8mm	Chisel	206-2635
21-10142		1.2mm	Chisel	206-2636
21-10144		1.6mm	Chisel	206-2637
21-10146		2.4mm	Chisel	206-2638
21-10148		0.5mm	Conical	206-2639
21-10150		0.2mm	Conical	206-2640
21-10152		2mm	45° Chisel	206-2642
21-10154		3mm	45° Chisel	206-2643
21-10156		4mm	45° Chisel	206-2644
21-10158		0.2mm	Conical	206-2645

Mfrs.		Price Per Pack		
List No.	Order Code	1+	5+	+
21-10140	206-2635	21.90	19.90	--
21-10142	206-2636	21.90	19.90	--
21-10144	206-2637	21.90	19.90	--
21-10146	206-2638	21.90	19.90	--
21-10148	206-2639	21.90	19.90	--
21-10150	206-2640	21.90	19.90	--
21-10152	206-2642	21.90	19.90	--
21-10154	206-2643	21.90	19.90	--
21-10156	206-2644	21.90	19.90	--
21-10158	206-2645	21.90	19.90	--

Multicomp products offer high quality but at value for money to meet your engineering needs, our range includes Capacitors, Resistors, Potentiometers, Connectors, Semiconductors, and LED's, many products in our Passives range are now available in cut tape and full reel options.

For more information please visit uk.farnell.com/multicomp

Lead Free Alloy, Rosin Flux



New alloy: Tin (97.1%), Silver (2.6%), Copper (0.3%)



- Lead free
- Contains one core of rosin based flux
- Amber coloured (rosin) residues do not require cleaning
- For all general purpose lead-free electronic assembly and re-work applications
- Complies with all lead-free legislative requirements

Alloy Sn97.1Ag2.6Cu0.3
Melting Temperature 217°C - 224°C

Tip Temperature (Approx.) 350°C

685423

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	5+
250g Reels	0.5mm	101-5443	31.52	29.97
	0.7mm	101-5444	26.32	24.99
	1mm	101-5445	25.08	23.85
	1.2mm	101-5446	25.03	23.80
500g Reels	0.7mm	101-5447	51.84	49.27
	1mm	101-5449	49.36	46.91
	1.2mm	101-5451	49.24	46.78

Lead Free Alloy, No-Clean Flux



New alloy: Tin (97.1%), Silver (2.6%), Copper (0.3%)



- Halide free flux formulation
- Contains 5 cores of flux
- Non-corrosive reliable flux residues
- Minimal clear residues do not require cleaning
- Complies with all lead-free legislative requirements

- Suitable for high reliability, lead-free, no-clean assembly, or rework of PCBs assembled in a lead-free no-clean process

Alloy Sn97.1Ag2.6Cu0.3
Melting Temperature 217°C - 224°C

Tip Temperature (Approx.) 350°C

685424

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	5+
250g Reels	0.5mm	101-5452	31.01	29.45
	0.7mm	101-5453	26.01	24.72
	1mm	101-5454	24.83	23.60
	1.2mm	101-5455	24.28	23.07
500g Reels	0.7mm	101-5456	51.23	48.66
	1mm	101-5457	48.86	46.40
	1.2mm	101-5458	48.75	46.30

Lead Free Alloy, Mildly Activated No-Clean Flux



New alloy: Tin (97.1%), Silver (2.6%), Copper (0.3%)



- Mildly activated no-clean flux formulation
- Contains 5 cores of flux
- Increased flux content (2.7% by weight) - low fuming and low spitting
- Minimal clear residues, do not require cleaning

- Complies with all lead-free legislative requirements
- Suitable for general lead-free, no-clean assembly, or rework of PCBs assembled in a lead-free no-clean process

Alloy Sn97.1Ag2.6Cu0.3
Flux Type Mildly activated, no-clean

Melting Temperature 217°C - 224°C
Tip Temperature (Approx.) 350°C - 370°C

685425

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	5+
250g Reels	0.5mm	101-5459	31.01	29.45
	0.7mm	101-5460	26.01	24.72
	1mm	101-5462	24.83	23.60
	1.2mm	101-5463	17.55	17.08
500g Reels	0.7mm	101-5464	51.23	48.66
	1mm	101-5465	47.90	45.50
	1.2mm	101-5466	34.59	33.68

Lead-Free Alloy, High Activity Rosin Flux



New alloy: Tin (97.1%), Silver (2.6%), Copper (0.3%)



- Contains 5 cores of halide-activated rosin based flux
- Pale coloured residues do not require cleaning
- Extra wetting properties for faster soldering

- For all general purpose lead-free electronic assembly and re-work applications
- Complies with all lead-free legislative requirements

Alloy Sn97.1Ag2.6Cu0.3
Flux Type Halide-activated rosin-based flux

Melting Temperature 217°C - 224°C
Tip Temperature (Approx.) 350°C - 370°C

685426

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	5+
250g Reels	0.5mm	101-5467	31.01	29.45
	0.7mm	101-5468	26.01	24.72
	1mm	101-5469	24.83	23.60
	1.2mm	101-5470	24.75	23.52
500g Reels	0.7mm	101-5471	51.23	48.66
	1mm	101-5472	48.86	46.40
	1.2mm	101-5474	48.75	46.30

Lead Free Alloy, No-Clean Flux



- Halide free (Zero activation) flux formulation
- Low fuming and low spitting
- Minimal clear residues do not require cleaning
- Complies with all lead-free legislative requirements

- Suitable for high solderability, lead-free, no-clean assembly, or rework of PCBs assembled in a lead-free no-clean process or that have already been cleaned

Alloy 99.3% Tin, 0.7% Copper
Melting Temperature 227°C

Tip Temperature (Approx.) 350°C

685427

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	507-1379	15.45	13.77
	0.7mm	507-1380	15.45	13.77
	0.9mm	507-1392	15.45	13.77
	1.2mm	507-1409	15.16	14.42
500g Reels	0.7mm	507-1422	20.37	18.95
	0.9mm	507-1434	19.48	17.36
	1.2mm	507-1446	19.00	16.93



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Lead-Free Alloy, High Activity Rosin Flux



- Contains multiple cores of rosin based flux
- Pale coloured residues do not require cleaning
- Extra wetting ability for faster soldering
- For all general purpose lead-free electronic assembly and re-work applications

- Complies with all lead-free legislative requirements

Alloy Lead Free, 99.3% Tin, 0.7% Copper Alloy
Melting Temperature 227°C
Flux Type Type 511, Rosin Based Tip Temperature (Approx.) 350°C - 370°C

685428

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	509-0593	15.45	13.77
	0.7mm	509-0600	16.59	15.80
	0.9mm	509-0611	15.25	14.47
	1.2mm	509-0623	15.16	14.42
500g Reels	0.7mm	509-0647	32.36	30.71
	0.9mm	509-0659	29.65	28.14
	1.2mm	509-0660	29.53	28.07

Lead Free Alloy, Mildly Activated No-Clean Flux



- Mildly activated no-clean flux formulation
- Increased flux content (3% by weight) - low fuming and low spitting
- Minimal clear residues no not require cleaning
- Complies with all lead-free legislative requirements

- Suitable for general lead-free, no-clean assembly, or rework of PCBs assembled in a lead-free no-clean process

Alloy Lead Free, 99.3% Tin, 0.7% Copper Alloy
Flux Type Type 505, Rosin Based
Melting Temperature 227°C
Tip Temperature (Approx.) 350°C - 370°C

686017

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	509-0672	18.96	17.05
	0.7mm	509-0684	16.59	15.80
	0.9mm	509-0696	15.25	14.47
	1.2mm	509-0702	15.16	14.42
500g Reels	0.7mm	509-0726	32.36	30.71
	0.9mm	509-0738	29.65	28.14
	1.2mm	509-0740	29.53	28.07

Lead Free Alloy, Rosin Flux



- Lead free
- Contains multiple cores of rosin based flux
- Amber coloured (rosin) residues do not require cleaning
- For all general purpose lead-free electronic assembly and re-work applications
- Complies with all lead-free legislative requirements

Alloy Lead Free 99.3% Tin, 0.7% Copper Alloy
Melting Temperature 227°C
Tip Temperature (Approx.) 350°C

686014

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	507-1290	15.45	13.87
	0.7mm	507-1306	19.70	15.32
	0.9mm	507-1318	18.96	17.05
	1.2mm	507-1320	17.79	13.74
500g Reels	0.7mm	507-1343	32.36	30.71
	0.9mm	507-1355	29.65	28.14
	1.2mm	507-1367	29.53	28.07



TROUBLESHOOTING TIPS

Chat online to one of our technical engineers at [farnell.com](https://www.farnell.com)

60/40 Alloy, No-Clean Flux



- Halide free (Zero activation) flux formulation
- Flux content 2.2% by weight - low fuming and low spitting
- Minimal clear residues do not require cleaning
- Suitable for general no-clean assembly, or rework of PCBs assembled in a no-clean process or that have already been cleaned

Alloy 60/40 (60% Tin, 40% Lead)
Melting Temperature 180°C
Tip Temperature (Approx.) 308°C

686015

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	507-1136	15.27	14.16
	0.7mm	507-1148	17.16	13.22
	0.9mm	507-1150	12.74	11.82
	1.2mm	507-1161	13.03	12.06
500g Reels	0.7mm	507-1185	30.95	24.92

60/40 Alloy, Mildly Activated No-Clean Flux



- Mildly activated (0.5%) flux formulation
- Flux content 3% by weight - low fuming and low spitting
- Minimal clear residues no not require cleaning
- Suitable for general assembly or rework of PCBs

Alloy 60, 40 Sn, Pb
Melting Temperature 180°C
Tip Temperature (Approx.) 308°C

686016

Weight	Wire Diameter	Order Code	Price Per Reel	
			1+	10+
250g Reels	0.5mm	507-1215	15.13	14.01
	0.7mm	507-1227	8.60	7.85
	0.9mm	507-1239	12.91	11.98
500g Reels	0.7mm	507-1264	27.22	23.84
	1.2mm	507-1288	25.48	23.62

Quick Blow(F) Ceramic



MCF04C Series



- Complies with IEC 127, DIN41660 and BS4265
- UL Recognised

Voltage rating 250V Breaking capacity 1500A @ 250V

Mfrs. List No. MCF04C + Rating

685430

Current Rating	Order Code	Price Each				
		10+	100+	500+	1K+	3K+
100mA	112-3145	0.98	0.93	0.86	0.78	0.72
125mA	112-3147	0.98	0.93	0.86	0.78	0.72
200mA	112-3150	0.98	0.93	0.86	0.78	0.72
250mA	112-3151	0.37	0.33	0.31	0.29	0.27
500mA	112-3158	0.81	0.77	0.71	0.65	0.59
800mA	112-3162	0.57	0.54	0.50	0.46	0.41
1A	112-3148	0.57	0.55	0.50	0.46	0.42
1.25A	112-3143	0.35	0.27	0.26	0.24	0.23
2A	112-3152	0.81	0.77	0.71	0.65	0.59
2.5A	112-3149	0.81	0.77	0.71	0.65	0.59
3.15A	112-3153	0.57	0.54	0.50	0.46	0.41
4A	112-3157	0.57	0.54	0.50	0.46	0.41
5A	112-3159	0.81	0.77	0.71	0.65	0.59
6.3A	112-3160	0.57	0.54	0.50	0.46	0.41
8A	112-3163	1.04	0.98	0.91	0.83	0.76
10A	112-3146	0.80	0.75	0.70	0.63	0.58

Quick Blow (F) Glass



20 x 5mm Fuses MCF05G



- Complies with IEC127 Part 2 Sheet II, DIN41661 and BS4265
- UL Recognised

Mfrs. List No. MCF05G + Rating

Voltage rating (Vn) 250V ac
Breaking capacity 100mA to 31.5A = 35A @ 250V, 4A to 10A = 10 X In @ 250V

Order Multiple=10

Current Rating	Order Code	10+	100+	500+	1K+	3K+
100mA	112-3167	0.660	0.620	0.570	0.530	0.480
125mA	112-3169	0.940	0.890	0.820	0.750	0.680
160mA	112-3170	0.430	0.390	0.360	0.330	0.310
200mA	112-3173	0.430	0.390	0.360	0.330	0.310
250mA	112-3174	0.470	0.400	0.380	0.370	0.360
315mA	112-3177	0.430	0.390	0.360	0.330	0.310
400mA	112-3179	0.430	0.390	0.360	0.330	0.310
500mA	112-3182	0.131	0.104	0.090	0.079	0.078
630mA	112-3185	0.128	0.097	0.083	0.079	0.074
800mA	112-3186	0.132	0.117	0.116	0.104	0.103
1A	112-3171	0.135	0.123	0.113	0.104	0.097
1.25A	112-3164	0.122	0.108	0.106	0.096	0.095
1.6A	112-3165	0.193	0.176	0.161	0.149	0.138
2A	112-3175	0.128	0.097	0.083	0.079	0.074
2.5A	112-3172	0.135	0.123	0.113	0.104	0.097
3.15A	112-3176	0.135	0.123	0.113	0.104	0.097
4A	112-3181	0.193	0.176	0.161	0.149	0.138
5A	112-3183	0.128	0.097	0.083	0.079	0.078
6.3A	112-3184	0.131	0.116	0.115	0.103	0.102
8A	112-3187	0.430	0.400	0.370	0.340	0.310
10A	112-3168	0.430	0.400	0.370	0.340	0.310

685431

Antisurge (T) Glass

20 x 5mm Fuses MCF06G Series



- Complies with IEC127, DIN41662, IEC 60127-2 and BS4265
- UL Recognised

Mfrs. List No. MCF06G + rating

Voltage rating 250V
Breaking capacity 32MA to 3.15A, 35A @ 250V, 4A to 6.3A 10 x IN @ 250V

685880

Order Multiple=10

Current Rating	Order Code	10+	100+	500+	1K+	3K+
32mA	112-3202	1.280	1.210	1.120	1.020	0.930
40mA	112-3204	1.280	1.210	1.120	1.020	0.930
50mA	112-3207	1.280	1.210	1.120	1.020	0.930
63mA	112-3213	1.280	1.210	1.120	1.020	0.930
80mA	112-3215	0.900	0.850	0.780	0.710	0.650
100mA	112-3190	0.740	0.700	0.650	0.590	0.540
125mA	112-3193	0.740	0.700	0.650	0.590	0.540
160mA	112-3194	0.520	0.490	0.460	0.410	0.380
200mA	112-3197	0.740	0.700	0.650	0.590	0.540
250mA	112-3198	0.520	0.490	0.460	0.410	0.380
315mA	112-3201	0.740	0.700	0.650	0.590	0.540
400mA	112-3203	0.740	0.700	0.650	0.590	0.540
500mA	112-3206	0.630	0.570	0.520	0.480	0.450
630mA	112-3212	0.430	0.290	0.230	0.196	0.184
800mA	112-3214	0.440	0.400	0.360	0.340	0.320
1A	112-3195	0.630	0.570	0.520	0.480	0.450
1.25A	112-3188	0.630	0.570	0.520	0.480	0.450
1.6A	112-3189	0.630	0.570	0.520	0.480	0.450
2A	112-3199	0.630	0.570	0.520	0.480	0.450
2.5A	112-3196	0.600	0.540	0.490	0.460	0.430
3.15A	112-3200	0.630	0.570	0.520	0.480	0.450
4A	112-3205	0.630	0.570	0.520	0.480	0.450
5A	112-3209	0.630	0.570	0.520	0.480	0.450
6.3A	112-3211	0.330	0.290	0.280	0.270	0.260
10A	112-3192	1.030	0.970	0.900	0.820	0.750

Semi-Enclosed

20 x 5mm PCB Mount



Moulded in black glass filled nylon with a small window which allows easy visual inspection of the fuse.

Rating 5A @ 250V
Operating temperature -40°C to +110°C

Mfrs. List No. MCHTC-100M

H=11.4, W=9.4, D=24.4,
F.C.=22.6 pins x 0.5 x 1.2



685433

Order Multiple=10

Order Code	10+	50+	100+	500+	2K5+
976-120	0.250	0.230	0.168	0.155	0.141

6.35 x 32mm (1/4 x 1 1/4") - Quick Blow (F) Glass

MCF01G Series



- Glass cartridge, nickel plated end caps
- To IEC 127
- Axially centred element

Breaking capacity @ 250V - 35A (500mA - 1A), 100A (2A - 3A), 200A (4A - 10A)

685434

Price Per Pack of 10

Rating	Mfrs. List No.	Order Code	1+	5+	10+	25+
500mA	CF06332F/500/10	187-1072	1.30	1.17	1.03	0.98
1A	CF06332F/1/10	187-1073	1.30	1.17	1.03	0.98
2A	CF06332F/2/10	187-1074	1.30	1.17	1.03	0.98
3A	CF06332F/3/10	187-1075	1.30	1.17	1.03	0.98
4A	CF06332F/4/10	187-1076	1.58	1.43	1.26	1.19
5A	CF06332F/5/10	187-1077	1.30	1.17	1.03	0.98
6A	CF06332F/6/10	187-1078	1.30	1.17	1.03	0.98
10A	CF06332F/10/10	187-1081	1.30	1.17	1.03	0.98

6.35 x 32mm (1/4 x 1 1/4") - Quick Blow (F) Ceramic

MCF07C Series



- Ceramic cartridge, nickel plated end caps
- To IEC 127
- Sand filled

Breaking capacity 1000A

685435

Price Per Pack 10

Rating	Mfrs. List No.	Order Code	1+	5+	10+	25+
500mA	CF06333CF500/10	187-1060	3.58	3.38	3.14	2.51
1A	CF06333CF/1/10	187-1061	3.49	3.38	3.14	2.51
2A	CF06333CF/2/10	187-1062	3.49	3.38	3.14	2.51
3A	CF06333CF/3/10	187-1063	3.49	3.38	3.14	2.51
5A	CF06333CF/5/10	187-1064	3.49	3.38	3.14	2.51
6A	CF06333CF/6/10	187-1065	3.50	3.39	3.15	2.51
8A	CF06333CF/8/10	187-1066	3.49	3.38	3.14	2.51
10A	CF06333CF/10/10	187-1068	3.49	3.38	3.14	2.51
12A	CF06333CF/12/10	187-1069	3.50	3.37	3.15	2.51
15A	CF06333CF/15/10	187-1070	3.49	3.39	3.15	2.51
20A	CF06333CF/20/10	187-1071	4.02	3.81	3.38	2.95

DS and DP Series

100mA @ 50V dc

**BEST SELLER**

Top actuated H=6.9, W=6.6
Side actuated H=9.9, W=11.52
Piano key actuated H=10.3, W=11.7
Pin dia=0.6, Pins=7.62 x 2.54 spacing

- Gold plated contacts and terminals, single throw
- Suitable for most cleaning and soldering processes
- Choice of top actuators or 'piano key' actuators

It is recommended to solder switches in the 'off' factory supplied position

Dielectric strength 500V ac
Operating temperature -20°C to 70°C
Initial contact resistance 50mohm
Insulation resistance 100Mohm @ 500V dc

685436

No. of Ways	Length	Mfrs. List No.	Order Code	1+	50+	100+	500+	1K+
Top Actuated								
2	8.96	MCDS02	947-2126	1.00	0.97	0.94	0.87	0.78
3	8.98	MCDS03	125-5223	0.75	0.59	0.54	0.47	0.46
4	11.52	MCDS04	947-1570	0.75	0.67	0.58	0.50	0.48
5	14.06	MCDS05	125-5225	0.57	0.41	0.39	0.35	0.34
6		MCDS06	947-1588	0.92	0.81	0.70	0.60	0.59
7	19.14	MCDS07	125-5226	0.68	0.55	0.47	0.44	0.43
8	21.68	MCDS08	947-1596	1.22	1.18	1.13	1.06	1.03
9	24.22	MCDS09	125-5227	0.55	0.42	0.39	0.37	0.36
10		MCDS10	947-2134	0.92	0.60	0.58	0.55	0.54
12	32.00	MCDS12	947-2142	1.22	0.84	0.83	0.52	0.51

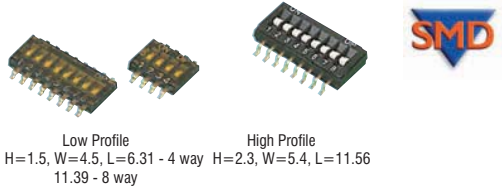
Side Actuated								
2	6.44	MCD A02	125-5229	0.45	0.43	0.42	0.38	0.37
4	11.72	MCD A04	947-1545	0.89	0.83	0.80	0.76	0.75
6	16.8	MCD A06	947-1553	1.01	0.90	0.86	0.82	0.80
8	21.88	MCD A08	947-1561	1.16	1.07	1.03	0.98	0.92
10	26.76	MCD A10	125-5231	0.69	0.64	0.62	0.58	0.57
12	31.84	MCD A12	125-5232	1.25	1.15	1.09	1.05	1.01

Piano Key Actuated								
2	6.64	MCD P02	125-5233	0.53	0.50	0.49	0.47	0.46
3	9.18	MCD P03	152-2004	0.36	0.34	0.33	0.32	0.28
4	11.71	MCD P04	947-1600	0.90	0.85	0.71	0.62	0.60
5	14.26	MCD P05	152-2005	0.44	0.40	0.39	0.38	0.36

No. of	Mfrs.			Price Each				
Ways	Length	List No.	Order Code	1+	50+	100+	500+	1K+
Piano Key Actuated								
6	16.80	MCDP06	947-1618	1.00	0.97	0.91	0.80	0.76
8	21.87	MCDP08	947-1626	1.04	0.98	0.94	0.83	0.80
9	24.42	MCDP09	152-2007	0.78	0.74	0.71	0.68	0.66
10	26.96	MCDP10	125-5234	0.84	0.78	0.77	0.75	0.71
12	32.04	MCDP12	125-5235	1.21	0.48	0.46	0.45	0.44

Half Pitch

High or Low Profile



- Single pole single throw half pitch DIL switches
 - Available in low or high profile
 - Recessed Actuator
 - UL recognised
- Contacts: Gold Plated over Nickel @ 24Vdc, @ 50Vdc non switching
- Contact rating: -20°C to 70°C
- Operating temperature: -20°C to 70°C
- Dielectric Strength: 300Vac 1 min.
- Terminals: Life expectancy 2000 ops. Insulation resistance 100Mohm

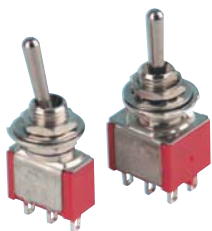
It is recommended to solder switches in the 'off' factory supplied position

685437

No. of Mfrs.				Price Each				
Ways	List No.	Order Code		1+	25+	50+	100+	500+
High Profile								
	MCHDS-08-T	947-2096	RL	0.53	0.46	0.42	0.38	0.35
Low Profile - Without Tape								
2	MCDHN-02F-V	160-5473		0.89	0.82	0.74	0.68	0.62
4	MCDHN-04F-V	160-5474		0.96	0.88	0.79	0.75	0.69
6	MCDHN-06F-V	160-5475		0.99	0.89	0.80	0.76	0.70
8	MCDHN-08F-V	160-5476		2.31	2.09	2.00	1.91	1.79
10	MCDHN-10F-V	160-5477		1.03	0.96	0.84	0.79	0.73
Low Profile - Top Tape Sealed								
2	MCDHN-02F-T-V	160-5478		0.91	0.83	0.75	0.71	0.63
4	MCDHN-04F-T-V	160-5479		0.96	0.87	0.78	0.74	0.68
6	MCDHN-06F-T-V	160-5480		0.95	0.84	0.76	0.72	0.67
8	MCDHN-08F-T-V	160-5481		1.07	0.98	0.87	0.82	0.76
10	MCDHN-10F-T-V	160-5482		1.10	1.02	0.90	0.84	0.78

Miniature, Panel Mounting

5A@120V ac/28V dc, 2A@250V ac



- Silver plated copper contacts
- Solder tag connections
- UL Recognised

Electrical life: 40000 ops.

Contact resistance: <10mohm @ 4V, 100mA

Operating temperature: -30°C to +85°C

Bush thread: 14/4-40 UNS-2A

Lever length: 10.25mm

Panel cut out=6.35

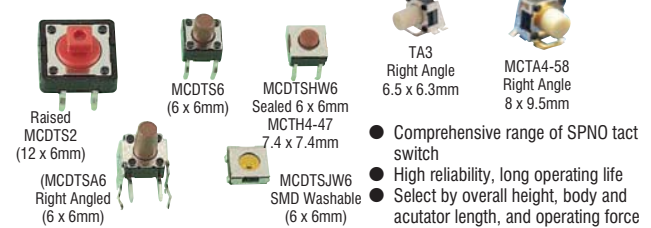
H=12.7, W=6.9

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Switch Function	Mfrs.			Price Each		
	List No.	Order Code		1+	100+	250+
SPDT On-On	1MS1T1B5M1QE	947-3378		1.24	1.07	0.95
SPDT On-Off-On	1MS3T1B5M1QE	947-3386		1.45	1.26	1.09
SPDT On-(On)	1MS2T1B5M1QE	155-0178		1.34	1.25	1.24
SPDT (On)-Off-(On)	1MS4T1B5M1QE	155-0179		1.34	1.25	1.24
SPDT On-Off-(On)	1MS5T1B5M1QE	155-0180		1.26	1.18	1.16
DPDT On-On	1MD1T1B5M1QE	947-3394		1.39	1.24	1.06
DPDT On-Off-On	1MD3T1B5M1QE	947-3408		1.54	1.36	1.18
DPDT On-On-On	1MD6T1B5M1QE	155-0185		2.00	1.71	1.49
3PDT On-On	1M31T1B5M1QE	155-0187		3.87	3.65	3.61
4PDT On-On	1M41T1B5M1QE	155-0192		4.74	4.13	4.03
4PDT On-Off-On	1M43T1B5M1QE	155-0194		3.91	3.37	2.98
4PDT On-On-On	1M46T1B5M1QE	155-0197		4.68	4.06	3.54

Tact Switches

SPNO



Applicable Series	MCDTS2, MCDTS6, MCDTSHW6, MCDTSHW6, MCDTSA6 & MCDTSJW6	MCTA3	MCTA4 & MCTH4
Voltage rating	12V dc	5VDC	50VDC
Current rating	50mA	1.5mA	50mA

685439

Order Multiple=5		Price Each			
	Order Code	5+	50+	100+	250+ 500+

Actuator style/Operating Force (N)					
MCDTS2 Series (12mm x 12mm) - PCB drilling 12.5mm x 5.0mm					
Raised/160	947-1634	0.161	0.158	0.154	0.147 0.133
Flat/160	947-1642	0.250	0.230	0.210	0.196 0.190
Raised/260	947-1650	0.460	0.450	0.430	0.370 0.360
Flat/260	947-1669	0.460	0.450	0.430	0.370 0.360

MCDTS6 Series (6mm x 6mm) - PCB drilling 6.5mm x 4.5mm					
Overall height/Operating Force (N)					
4.3mm/100	947-1677	0.270	0.230	0.210	0.186 0.173
/160	947-1685	0.086	0.076	0.044	0.038 0.036
4.3mm/260	947-1693	0.460	0.390	0.360	0.320 0.300
/160	947-1707	0.074	0.063	0.046	0.042 0.038
5mm/260	947-1715	0.290	0.280	0.270	0.260 0.250
7mm/100	947-1723	0.182	0.161	0.134	0.123 0.117
7mm/160	947-1731	0.057	0.049	0.038	0.035 0.034
7mm/260	947-1740	0.460	0.380	0.330	0.290 0.260
9.5mm/100	947-1758	0.250	0.196	0.136	0.120 0.114
9.5mm/160	947-1766	0.210	0.200	0.196	0.182 0.174
9.5mm/260	947-1774	0.350	0.260	0.200	0.182 0.174

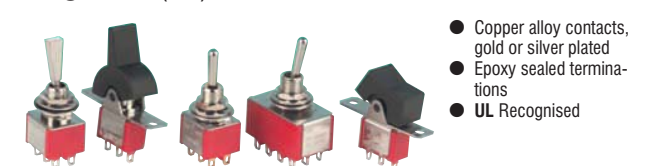
MCDTSHW6 Series (6mm x 6mm) Washable - PCB drilling 6.5mm x 4.0mm					
3.8mm/160	947-1782	0.460	0.400	0.370	0.350 0.330

MCDTSA6 Series (6mm x 6mm) Right Angled - PCB drilling about C/L of actuator					
4.5mm & 7.0mm row separation 2.5mm					
Overall length (Switch body & actuator)/Operating force (N)					
/100	947-1790	0.310	0.300	0.290	0.280 0.220
8.35mm/160	947-1804	0.310	0.300	0.290	0.280 0.220
8.35mm/260	947-1820	0.310	0.300	0.290	0.280 0.250
3.85mm/100	947-1839	0.310	0.300	0.290	0.280 0.230
3.85mm/160	947-1847	0.310	0.300	0.290	0.280 0.230
3.85mm/260	947-1855	0.310	0.300	0.290	0.280 0.220

MCDTSJW6 Series (6mm x 6mm) SMD Washable					
Overall height/Operating force (N)					
2.3mm/160	947-1863	0.460	0.420	0.370	0.340 0.320
3.1mm/160	947-1871	0.460	0.410	0.370	0.330 0.310

Miniature, Panel Mounting

5A @ 28V dc or 125V dc, 2A @ 250Vac (Silver)
0.4VA @ 20V ac/dc (Gold)



		Body Dimensions		
		H	W	D
Toggles	SPDT	12.7	11.43	10.54
	DPDT	12.7	16.51	10.54
	3PDT	12.7	21.59	10.54
	4PDT	12.7	21.59	10.54
Rocker/ Lever handle	SPDT	12.7	6.86	9.56
	DPDT	12.7	11.43	9.56

Silver plated contacts: 5A @ 28V dc or 115V ac resistive load, 2A @ 250V ac

Gold plated contacts: 0.4VA @ 20V max. ac/dc

Electrical life: 40000 operations

Contact resistance: <10mohm @ 4Vdc 1A

Bush thread: 1/4" x 40 NS

Lever length: 10.4

Operating temperature: -30°C to +85°C



TROUBLESHOOTING TIPS

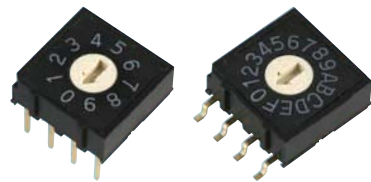
Chat online to one of our technical engineers at **farnell.com**

685440

Toggle	Switch Contacts	Order Code	Price Each			
			1+	25+	100+	250+
SPDT On-On		947-3416	1.72	1.65	1.31	1.17
SPDT On-On		947-3424	3.95	3.46	3.13	2.88
SPDT On-Off-On		947-3432	2.49	2.32	2.11	2.04
SPDT On-Off-On		947-3440	3.92	3.29	2.85	2.50
SPDT (On)-Off-(On)		947-3467	2.03	1.65	1.44	1.27
SPDT On-Off-(On)		947-3475	1.84	1.49	1.30	1.16
SPDT On-Off-(On)		947-3483	2.05	1.66	1.45	1.27
SPDT On-(On)		947-3491	4.31	3.01	2.25	1.76
DPDT On-On		947-3513	2.94	2.78	2.64	2.48
DPDT On-On		947-3521	4.47	3.97	3.43	3.10
DPDT On-Off-On		947-3530	3.09	2.91	2.78	2.62
DPDT On-Off-On		947-3548	5.81	4.86	4.24	3.53
DPDT (On)-Off-(On)		947-3556	4.58	3.80	2.89	2.19
DPDT (On)-Off-(On)		947-3564	6.53	5.49	4.86	4.26
DPDT On-Off-(On)		947-3572	5.82	4.24	3.24	2.56
DPDT On-Off-(On)		947-3580	3.31	2.78	2.50	2.16
3PDT On-On		947-3599	7.86	6.15	4.88	3.91
4PDT On-On		947-3602	7.96	6.75	5.68	5.21
Flat Toggle						
SPDT On-On		947-3610	5.08	3.61	2.72	2.13
SPDT On-Off-On		947-3629	5.38	3.84	2.91	2.29
SPDT (On)-Off-(On)		947-3637	3.65	3.00	2.62	2.27
SPDT On-Off-(On)		947-3645	5.45	3.90	2.95	2.32
DPDT On-On		947-3661	3.18	2.93	2.77	2.70
DPDT On-Off-On		947-3670	4.22	3.59	3.17	2.77
3PDT On-On		947-3688	4.46	3.69	3.16	2.79
4PDT On-On		947-3696	9.01	7.46	6.27	5.78

10mm x 10mm Rotary DIP Switches

25mA @ 24V dc



- Real codes DIP switching
- Available in either Through Hole or Surface Mount versions
- Flammability rating UL 94V-0

Switching Capacity
Non-Switching Rating
Contact Resistance
Insulation Resistance

25mA @ 24V
@ 50V
200mohm
100Mohm @ 250VDC

Ambient Temperature
Voltage Proof
Life Expectancy

-25 to 80°C
250VAC for 1 minute
20000 steps min.

685441

No. of Ways	Pin Config.	Mfrs.	Order Code	Price Each			
		List No.		1+	25+	100+	250+
Through Hole Mounting - Recessed Actuator							
10	4 x 1	MCRH4AF-10R	152-2028	0.83	0.71	0.65	0.64
10	3 x 3	MCRH3AF-10R	152-2029	1.03	0.92	0.82	0.76
10	3 x 2	MCRH2AF-10R	152-2030	0.73	0.65	0.61	0.60
16	4 x 1	MCRH4AF-16R	152-2031	2.11	1.77	1.42	1.35
16	3 x 3	MCRH3AF-16R	152-2032	2.05	1.65	1.39	1.29
16	3 x 2	MCRH2AF-16R	152-2033	1.12	1.01	0.89	0.83
Through Hole Mounting - 3.2mm Actuator							
10	3X2	MCRH2MAF-10R-V-B	NEW 208-2992	1.08	0.98	0.88	0.80
16	3X2	MCRH2MAF-16R-V-B	NEW 208-2993	1.08	0.98	0.88	0.80
10	3X3	MCRH3MAF-10R-V-B	NEW 208-2994	1.32	1.13	1.00	0.88
16	3X3	MCRH3MAF-16R-V-B	NEW 208-2995	1.08	0.98	0.88	0.80
Through Hole Mounting - 7.3mm Actuator							
10	3X2	MCRH2HAF-10R-V-B	NEW 208-2985	1.09	1.00	0.89	0.81
16	3X2	MCRH2HAF-16R-V-B	NEW 208-2987	1.09	1.00	0.89	0.81
10	3X3	MCRH3HAF-10R-V-B	NEW 208-2988	1.36	1.16	1.02	0.90
16	3X3	MCRH3HAF-16R-V-B	NEW 208-2989	1.36	1.16	1.02	0.90
10	4X1	MCRH4HAF-10R-V-B	NEW 208-2990	0.56	0.54	0.53	0.51
16	4X1	MCRH4HAF-16R-V-B	NEW 208-2991	1.09	1.00	0.89	0.81
Surface Mount - Recessed Actuator							
10	3 x 2	MCRM2AF-10R	152-2037	2.01	1.80	1.46	1.20
16		MCRM3AF-16R	152-2039	0.86	0.74	0.67	0.66
16	3 x 2	MCRM2AF-16R	152-2040	0.73	0.66	0.60	0.59
Surface Mount - 3.2mm Actuator							
10	3X2	MCRM2MAF-10R-V-B	NEW 208-3004	0.57	0.55	0.53	0.52
16	3X2	MCRM2MAF-16R-V-B	NEW 208-3005	1.11	1.02	0.91	0.82
10	3X3	MCRM3MAF-10R-V-B	NEW 208-3006	1.38	1.18	1.03	0.91
16	3X3	MCRM3MAF-16R-V-B	NEW 208-3007	1.11	1.02	0.91	0.82

No. of Ways	Pin Config.	Mfrs. List No.	Order Code	1 +	25 +	100 +	250 +
Surface Mount - 7.3mm Actuator							
10	3X2	MCRM2HAF-10R-V-B	NEW 208-2996	0.58	0.56	0.54	0.53
16	3X2	MCRM2HAF-16R-V-B	NEW 208-2997	1.13	1.03	0.92	0.84
10	3X3	MCRM3HAF-10R-V-B	NEW 208-2999	1.40	1.20	1.05	0.94
16	3X3	MCRM3HAF-16R-V-B	NEW 208-3001	1.40	1.20	1.05	0.94
10	4X1	MCRM4HAF-10R-V-B	NEW 208-3002	0.58	0.56	0.54	0.53
16	4X1	MCRM4HAF-16R-V-B	NEW 208-3003	1.13	1.03	0.92	0.84
Through Hole Mounting - Right Angle Terminals							
10	3X2	MCRV2AF-10R-V-B	NEW 208-3008	1.06	0.97	0.87	0.78
16	3X2	MCRV2AF-16R-V-B	NEW 208-3009	1.30	1.12	0.99	0.87
10	3X3	MCRV3AF-10R-V-B	NEW 208-3010	1.30	1.12	0.99	0.87
16	3X3	MCRV3AF-16R-V-B	NEW 208-3011	1.06	0.97	0.87	0.78
10	4X1	MCRV4AF-10R-V-B	NEW 208-3013	1.30	1.12	0.99	0.87
16	4X1	MCRV4AF-16R-V-B	NEW 208-3014	1.30	1.12	0.99	0.87
Through Hole Mounting - Kinked Pins							
10	3X2	MCRS2AF-10R-V-B	NEW 208-3015	1.06	0.97	0.87	0.78
16	3X2	MCRS2AF-16R-V-B	NEW 208-3016	1.06	0.97	0.87	0.78
10	3X3	MCRS3AF-10R-V-B	NEW 208-3017	1.06	0.97	0.87	0.78
16	3X3	MCRS3AF-16R-V-B	NEW 208-3018	1.06	0.97	0.87	0.78
10	4X1	MCRS4AF-10R-V-B	NEW 208-3019	1.06	0.97	0.87	0.78
16	4X1	MCRS4AF-16R-V-B	NEW 208-3020	1.06	0.97	0.87	0.78

Bi-Metallic - Auto Reset



Style A
H = 21 (overall), W = 31, D = 19mm
Fixing centres = 24mm (Holes M3)

Style B
H = 16 (overall), W = 30, D = 17mm
Fixing centres = 24mm (Hole Dia. = 3.7mm)

Contact rating (all types)
Material - Body
Material - Base
Material - Mounting flange
Connections

Normally closed (opening on temperature rise) and normally open (closing on temperature rise) types are available. All switches reset when the temperature falls to the reset level.

- Automatically re-setting thermal switches
- Snap-action bi-metallic SPST contacts
- Contacts are isolated from the mounting base
- Reset level is specified to within a close tolerance band
- Indication of switch temperature is given on base of switch

250V ac, 15A 125Vac (100,000 cycles)
Phenolic (Style A), Thermoplastic (Style B)
Aluminium
Stainless steel (Style A), Aluminium (Style B)
1/4" (6.3 x 0.8mm) terminals

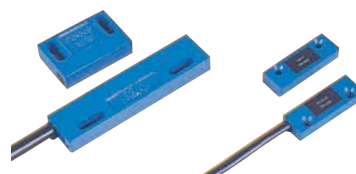
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Operating Temp.	Resetting Temp.	Case Style	Mfrs. List No.	Order Code	1+	50+	100+
Normally Closed Types							
15°C	5°C	A	A 15 03EN 175	732-400	3.01	2.76	2.32
20°C	10°C	A	03EN15T044(20/10)	732-412	3.01	2.76	2.32
30°C	20°C	A	03EN15T044(30/20)	606-686	3.01	2.76	2.32
40°C		A	03EN15T044(40/25)	491-445	2.47	2.22	1.80
50°C		B	T23A050ASR2-15	100-6842	2.55	2.26	1.80
70°C		B	T23A070ASR2-15	100-6843	2.55	2.26	1.80
90°C	70°C	B	T23A090ASR2-20	100-6844	2.55	2.26	1.80
100°C	85°C	B	T23A100ASR2-15	100-6845	2.43	2.15	1.71
112°C	97°C	B	T23A112ASR2-15	100-6846	2.55	2.26	1.80
125°C	110°C	B	T23A125BSR2-15	100-6847	2.55	2.26	1.80
150°C	135°C	B	T23A150BSR2-15	100-6849	2.55	2.26	1.80
Normally Open Types							
30°C	20°C	A	03EN35T044(20/30)	732-424	2.66	2.34	1.92
40°C	25°C	A	03EN35T044(25/40)	491-524	2.66	2.34	1.92
60°C	45°C	A	T23B060ASR2-15	100-6852	2.55	2.26	1.80
50°C	35°C	A	T23B050ASR2-15	100-6851	2.55	2.26	1.80
70°C		A	T23B070ASR2-15	100-6853	2.55	2.26	1.80
90°C	70°C	A	T23B090ASR2-20	100-6854	2.43	2.15	1.71

Reed, Metal Housing



Standard
Standard switch:
79.5 x 19.3 x 9.8,
Standard actuator:
38.1 x 25.4 x 9.8,
Miniature switch:
38.3 x 12.7 x 7.7,
Miniature actuator:
38.3 x 12.7 x 7.7.



Miniature
Fixing centres=50
(slots 14 x 4.7)
Fixing centres=28
(slots 14 x 4.7)
Fixing centres=25
(hole dia 3.1)
Fixing centres=25
(hole dia 3.1)

- Magnetically operated reed proximity switches encapsulated in pressure die castings with a blue powder coated finish
 - Solid construction gives protection in harsh environments, IP64 rating
 - Suitable for many applications with resistive loads
 - Intruder alarm and limit switch, micro-switch and proximity switch applications
 - Normally open or changeover contacts available
- Connection is by integral PVC cable, 0.5m for miniature and 0.7m length for standard switches.

Size	Contact Form (earthed*)	Max dc Contact Ratings		
Switches		V	V.A.	A
Miniature	SPNO	220	15	170-838
Miniature	SPCO	175	3	170-839
Standard	SPNO*	250	100	170-842
Standard	SPCO*	250	50	170-841
Order Code	Used with Order Code	Distance - face to face Min. (mm)	Max. (mm)	
170-840	170-838	7	13	
	170-839	5	13	
170-843	170-842	13	22	
	170-841	13	25	

685442

Type	Switches	Order Code	1+	10+	25+
Miniature	SPNO	170-838	8.59	6.88	6.34
Miniature	SPCO	170-839	13.76	11.19	10.28
Standard	SPNO	170-842	8.70	7.41	6.67
Standard	SPCO	170-841	14.58	12.77	12.40
Magnets					
Miniature		170-840	4.60	3.73	3.48
Standard		170-843	4.64	4.16	3.97

Vertical Float

Magnetic Level Sensor



- The world's smallest magnetic Level Sensor
- Ruthenium (Ru) contact material
- Operating temperature -20°C to +80°C
- Polypropylene case, float and nut
- Suitable for use in water and/or dilute acids
- Designed for applications such as coffee machines, tank level control and water dispensers

155-5936 155-5937 155-5938 177-5048 177-5049 177-5050 177-5051

Contact style	Form A	Form A	Form A	Form A	Form B	Form A	Form A
Travel - Float	3.5mm	8.5mm	18.5mm	5.5mm	8.5mm	8.5mm	18.5mm
Switching current	0.7A	1.5A	1.5A	0.7A	1.5A	1A	1A
Carry current							
Contact power rating	10VA	50VA	50VA	10VA	50VA	10VA	10VA
Switching voltage (Max.) dc	180V	200V	200V	180V	200V	200V	200V
Switching voltage (Max.) ac	130V	250V	250V	130V	250V	140V	140V

685443

Mfrs. List No.	Order Code	1+	5+	10+	25+
MCPLS-020-A-3	155-5936	4.42	4.02	3.86	3.83
MCPLS-031-A-6	155-5937	4.42	4.03	3.84	3.83
MCPLS-041-A-6	155-5938	4.42	4.03	3.84	3.83
MCPLS-020-B-3	177-5048	4.64	4.26	4.09	3.76
MCPLS-031-B-6	177-5049	5.00	4.53	4.36	3.97
MCPLS-031-A-3	177-5050	4.31	3.87	3.76	3.43
MCPLS-041-A-3	177-5051	4.48	4.09	3.92	3.59

Miniature Pressure Switches

25.4mm Square Body



- External (PSF100A Series) or Recessed (PSF102 Series) Quick Connect terminals
- Miniature size
- Quick response time
- Dependable long life

Case Material	Polycarbonate
Material	Polyurethane Diaphragm ★
★ 173-4671 has	PTFE
Switch Type	Off-On - 1NO
Contact Rating - Current	40mA - 30V ac/dc - Resistive Load
Operating Temperature	+4.5°C to +65.5°C (40°F to 150°F)
Switching Medium	Air, compatible fluids on "High" side
Porting	Two - 0.2" Diameter barbed ports for use with 3/16" ID Tubing

685444

Set Point	Mfrs. List No.	Order Code	1+	10+	25+	50+
PSF 100A Series - Patented shock and vibration resistant						
0.004 - 0.018psi	PSF100A-0.5	173-4664	19.95	18.62	17.12	16.47
0.054psi	PSF100A-1.5	173-4665	19.95	18.62	17.12	16.47
0.108psi	PSF100A-3.0	173-4666	19.95	18.62	17.12	16.47
0.217psi	PSF100A-6.0	173-4667	14.02	13.60	13.20	12.82
0.361psi	PSF100A-10.0	173-4668	17.39	16.72	15.51	14.97
0.541psi	PSF100A-15.0	173-4669	11.92	11.57	11.23	10.92
1.804psi	PSF100A-50.0	173-4670	14.02	13.60	13.20	12.60

Set Point	Mfrs. List No.	Order Code	1+	10+	25+	50+
Pressure						
PSF 102 Series - Field adjustable set point						
0.004 - 0.018psi	PSF102-7652-710	173-4671	15.10	13.76	12.90	12.38
0.018 - 0.072psi	PSF102-7651-711	173-4673	15.10	13.76	12.90	12.38
0.072 - 0.541psi	PSF102-7651-712	173-4674	15.10	13.76	12.90	12.38
0.541 - 2.17psi	PSF102-7651-713	173-4675	13.65	12.84	12.11	11.68
2.17 - 3.6psi	PSF102-7651-723	173-4676	13.45	12.61	11.87	11.42
3.6 - 25psi	PSF102-7651-714	173-4677	10.55	9.67	8.93	8.29

Position Sensors

Linear MagnetoPots



Rectilinear



Rotary

- Contactless Linear Sensor
- IP64 Debris Proof, Splash Proof
- Ideal for Hydraulic and Pneumatic Position Sensing
- Liquid Level Capability
- Life Cycle is >1 million

- Height: 3.50mm (0.138")
- Operating Temperature up to +85°C
- IP Rating of Active Area is IP64
- Crimpflex Solder Tab (ST)
- Requires MAGNET

The MagnetoPot is simple, yet elegant in its ability to track motion in a contactless manner. A magnet on the inside of a cylinder, or a magnet on the opposing side of a motion device will guide the built-in magnetics of the MagnetoPot for position location through a potentiometric output.

The MagnetoPot is a sealed potentiometer, in the membrane potentiometer tradition, yet it does not require a wiper/actuator to connect the collector and the resistor. Instead, the MagnetoPot is controlled by an outside magnet, which attracts the magnetic forces within the MagnetoPot to connect to the linear resistor and give linear potentiometer feedback. The wiper inside the sealed pot is magnetic or ferromagnetic, and will only perform if connected with an exterior magnet.

As opposed to a magnetically-based Reed Switch, which gives simply open or close signals, the MagnetoPot gives the full linear travel of a hydraulic or pneumatic cylinder. In liquid level applications, the MagnetoPot can attach to the outside of a liquid tank and give position of the magnet inside the float. No water ingress, no wearing of the part by environment, because the MagnetoPot is outside of the tank.

The MagnetoPot is made of polyester, fiberglass and kapton, depending on the specification required. It functions as a voltage divider, a resistor or rheostat, as desired by the end-user. By bringing the exterior magnet into a proximity necessary to connect with the internal magnetic attractors, the operator can obtain linear position sensing based on the location of the exterior magnet. As the exterior magnet moves, so does the electrical output of the MagnetoPot.

N.B. The MagnetoPot should not be mounted to a ferromagnetic surface.

685445

Active Length	Mfrs. List No.	Order Code	1+	5+	10+	25+
Rectilinear						
25mm	MP1-L-0025-103-5%-ST	181-8274	15.81	15.40	15.02	14.65
50mm	MP1-L-0050-103-5%-ST	181-8275	34.15	31.75	29.64	27.23
100mm	MP1-L-0100-103-5%-ST	181-8276	24.87	24.12	23.42	22.75
150mm	MP1-L-0150-103-5%-ST	181-8277	39.12	36.31	33.82	31.13
300mm	MP1-L-0300-103-5%-ST	181-8278	30.33	29.28	28.30	27.38
500mm	MP1-L-0500-103-5%-ST	181-8279	42.81	39.25	36.22	33.64
Rotary						
Center of Active of Track						
45.57mm	MP1-R-0046-353-103-5%-ST	181-8280	37.36	34.75	32.43	29.71

Bi-Metallic, Manual Reset



- Snap-action bi-metallic SPST contacts are isolated from the mounting base
- Horizontal tab connections allow easy access to reset pin
- UL Recognised and CSA approved

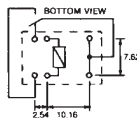
The switches are normally closed and open on temperature rise, then remain open until manually reset. Connection is by 6.3 x 0.8 (1/4") spade terminals.

Contact rating	250Vac (10,000 cycles), 15A 120Vac (6,000 cycles)					
Contact material	Silver alloy					
Operating Temp.	Mfrs. List No.	Order Code	Operating Temp.	Mfrs. List No.	Order Code	
45°C ±4°C	05EN1034(45/M)	732-515	100°C ±4°C	05EN1034(100/M)	732-564	
55°C ±4°C	05N1034(55/M)	732-527	115°C ±5°C	05EN1034(115/M)	732-576	
65°C ±4°C	05EN1034(65/M)	732-539	130°C ±5°C	05EN1034(130/C)	732-588	
80°C ±5°C	05EN1034(80/M)	732-540	150°C ±5°C	05EN1034(150/C)	732-590	
90°C ±5°C	05EN1034(90/M)	732-552				

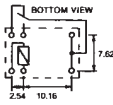
685446

Order Code	1+	10+	25+	100+	250+
All Order Codes	3.63	3.48	3.40	3.28	3.05

Subminiature High Sensitivity - MCS1H Series

**BEST
SELLER**D=10.5, W=15.5,
H=11.8mm

MCS1HS



MCS1KHS

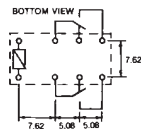
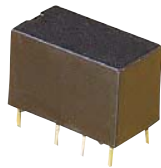
- Low profile
- High coil sensitivity
- Fully sealed
- UL Recognised

Contact arrangement	SPCO	Coil consumption	200mW
Contact rating	1A @ 24V dc/120V ac	Release	5ms
Contact material		Temperature range	-25°C to +55°C
Dielectric strength	1000V ac (coil-contact)		-25°C/55°C

685447

COIL		Order	Price Each					
Volts	Ω	Code	1+	25+	50+	100+	250+	500+
SPCO - MCS1H-S Series								
5V dc	120	948-0269	1.170	1.160	1.150	1.140	1.130	1.120
12V dc	700	948-0277	1.200	1.050	1.040	0.920	0.830	0.693
24V dc	2.8k	948-0285	1.320	1.120	1.090	0.960	0.850	0.721
SPCO - MCS1KH-S Series								
5V dc	125	948-0293	2.150	1.830	1.390	1.100	0.470	0.430
12V dc	720	948-0307	2.150	1.830	1.390	1.100	0.470	0.430
24V dc	2.88k	948-0315	2.060	1.750	1.320	1.060	0.450	0.410

Subminiature - High Sensitivity



L=21.2, W=10.8, H=12

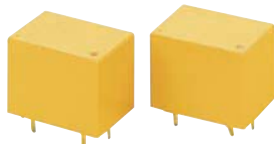
- Low profile
- Fully sealed
- Sensitive coil - 200mW
- UL Recognised

Contact arrangement	DPDT	Coil consumption	200mW
Contact rating	2A @ 24V dc/120V ac	Temperature range	-25°C to 70°C

685448

COIL		Order Code	Price Each				
Volts	Ω		1+	25+	50+	100+	250+
5V dc	50	948-0196	1.160	1.130	1.120	1.110	1.100
9V dc	405	948-0200	2.180	2.170	2.160	2.150	2.140
12V dc	720	948-0218	1.380	1.370	1.360	1.350	1.340
24V dc	2.88	948-0226	1.380	1.370	1.360	1.350	1.340

5A/10A Vertical - MCHRS4 Series

MCHRS4
H=15.8, W=15.5,
D=19.0MCHRS4E
H=17.0, W=15.5,
D=21.5

- SPCO contacts
- Sealed to allow washing after flow soldering

Contact rating	MCHRS4 Series	5A 240V ac / 24V	Operate/release time	8ms/5ms
	MCHRS4FH Series	10A 240V ac / 30V		10ms/5ms

685449

COIL			Price Each			
Volts	Ω	Order Code	1+	20+	100+	250+
SPCO, 5A - MCHRS4 Series						
5V dc	50	948-0102●	1.46	1.19	0.91	0.71
12V dc	320	948-0110●	1.05	0.87	0.66	0.52
24V dc	820	948-0129●	1.72	1.39	1.06	0.83
SPCO, 10A - MCHRS4FH Series						
5V dc	70	169-5972●	1.49	1.25	1.07	0.86
12V dc	400	169-5973●	1.49	1.46	1.43	1.41
24V dc	1600	169-5974●	1.49	1.46	1.43	1.41

5A/10A/16A Vertical - MCHRM Series



Contact arrangement	SPST/SPDT/DPST
Contact Rating	SPST: 10A @ 250VAC/30VDC SPDT: 16A @ 250VAC/30VDC DPST: 5A @ 250VAC/30VDC
Dielectric Strength	1500VAC, 1min between open contacts 2500VAC, 1min between coil and contacts
Operate/Release	15ms/8ms

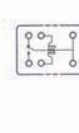
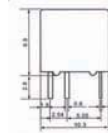
MCHRM: H=20.8, W=29, D=12.6mm
MCHRM1: H=20.8, W=29, D=12.6mm
MCHRM2: H=20.6, W=29, D=12.6mm
MCHRM3: H=25, W=24.4, D=10.4mm

- SPST, SPDT or DPST contacts
- Sealed to allow washing after flow soldering

685450

COIL			Price Each				
Volts	Ω	Order Code	1+	20+	100+	250+	500+
SPST - Standard - 720mW - MCHRM Series							
5V dc	36	948-0021●	1.36	1.17	1.06	0.94	0.79
9V dc	115	948-0030●	1.40	1.22	1.05	0.95	0.82
12V dc	200	948-0048●	2.16	1.87	1.68	1.46	1.26
24V dc	820	948-0056●	1.75	1.68	1.44	1.43	1.41
SPST - High Sensitivity - 250mW - MCHRM3 Series							
5V dc	100	NEW 188-5597●	1.11	1.01	0.90	0.82	0.69
12V dc	576	NEW 188-5598●	1.11	1.01	0.90	0.82	0.69
24V dc	2.304k	NEW 188-5599●	1.20	1.09	0.98	0.89	0.75
SPDT - Standard - 720mW - MCHRM2 Series							
5V dc	36	948-0064●	2.01	2.00	1.99	1.97	1.96
9V dc	115	948-0072●	0.59	0.54	0.50	0.46	0.43
12V dc	200	948-0080●	1.63	1.58	1.53	1.51	1.48
24V dc	820	948-0099●	1.67	1.50	1.49	1.48	1.46
SPDT - High Sensitivity - 540mW - MCHRM2 Series							
12V dc	267	NEW 188-5594●	1.20	1.16	1.14	1.13	1.12
24V dc	1.067k	NEW 188-5596●	1.49	1.36	1.22	1.10	0.93
DPST - Standard - 720mW - MCHRM1 Series							
5V dc	36	947-9937●	2.87	2.57	2.25	2.07	1.89
9V dc	115	947-9945●	0.68	0.62	0.57	0.53	0.50
12V dc	200	947-9953●	2.60	2.36	2.02	1.88	1.71
24V dc	820	947-9961●	2.49	2.20	1.94	1.81	1.64

Subminiature - HRA Series



- SPCO Series of relays
- Small size & light weight
- Plastic sealed (washable)
- DIL pitch terminal

Contact arrangement	SPCO	Life Elect.	100,000 operations
Contact rating	1A @ 24Vdc/120Vac	Life Mech.	10,000,000 Operations
Voltage Switching Max.	30Vdc/120Vac	Resistance Insulation	500VAC 1min between open contacts
Contact material	Gold / Silver	Strength Dielectric	1,000V ac 1min, contacts to coil
Current Switching Max.	2.0A	Temperature range	-25°C to 70°C
Resistance Contact	50mohm	Operate/Release	6ms Max./4ms Max

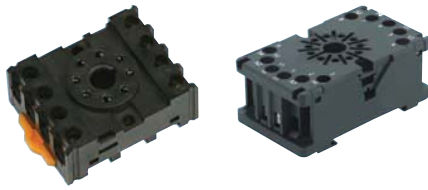
Order Code	Coil Voltage (V dc)	Coil Resistance (Ω's)	Coil Operate Voltage	Coil Release Voltage	Coil Power Consumption (mW)
948-0137	5	55	3.5V dc	0.25V dc	450
948-0145	12	320	8.4V dc	0.60V dc	450
948-0153	24	1.28	16.8V dc	1.20V dc	450
948-0161	5	75	3.5V dc	0.25V dc	330
948-0170	12	440	8.4V dc	0.60V dc	330
948-0188	24	1.56	16.8V dc	1.20V dc	380

685451

COIL		Price Each			
Volts	Order Code	1 +	25 +	100 +	250 +
SPCO - 1 Form C					
5V dc	948-0137	2.10	1.81	1.44	1.27
12V dc	948-0145	2.79	2.39	1.91	1.65
24V dc	948-0153	2.46	2.06	1.65	1.41
SPCO - 1 Form C High Sensitivity					
5V dc	948-0161	2.53	2.15	1.73	1.54
12V dc	948-0170	2.83	2.46	1.99	1.76
24V dc	948-0188	2.53	2.15	1.73	1.57

DIN Rail/Surface Mount

Screw Terminals



Rated Voltage 300V ac
Rated Current 10A
Insulation Voltage
Material - Base
≥3KV
Flame Retardant PA66



685452

Mfrs. List No.	Order Code	1+	25+	50+	100+	250+
Clip Attachment						
8 Pin MCCDSA-08	163-8152	0.96	0.87	0.78	0.71	0.60
11 Pin MCCDSA-11	163-8153	1.20	1.10	0.98	0.89	0.75
Spring Attachment						
8 Pin MCCDSB-08	163-8155	1.24	1.11	1.01	0.93	0.85
11 Pin MCCDSB-11	163-8156	3.12	2.72	2.42	2.17	2.04

AC Fans

Axial



- Low cost, high performance fans
- Overload protected using impedance protection
- Fitted with sleeve (SB) or ball (BB) bearings
- UL94V-0 Rated plastic impellers
- Supplied with wire lead connections

- Approved to CSA. UL Recognised

Dimensions (mm)	Voltage V ac	Power Watts	Air Flow Lt/Sec	Noise dB(A)	Bearing Type	Speed RPM	Mfrs. List No.	Order Code
80mm x 80mm x 25mm	115	11	37	34	Ball	2450	SF11580AT/1082HBL.GN	960-6530
80mm x 80mm x 25mm	230	14	37	34	Ball	2450	SF23080AT/2082HBL.GN	960-6548
80mm x 80mm x 38mm	115	14	40.8	32	Ball	2400	MCSF11580A 1083HBL.GN	156-8419
80mm x 80mm x 38mm	115	12	51	35	Sleeve	2450	SF11580A/1083HSL.GN	960-6599
80mm x 80mm x 38mm	230	18	39.08	35	Sleeve	2300	SF23080A/2083HSL.GN	960-6238
92mm x 92mm x 25mm	115	12	63	40	Ball	2350	SF11592A/1092HBL.GN	960-6556
92mm x 92mm x 25mm	230	14	63	40	Ball	2350	SF23092A/2092HBL.GN	960-6564
92mm x 92mm x 25mm	115	7	39	31	Ball	1800	MCSF11592A 1092MBL.GN	156-8420
92mm x 92mm x 25mm	240	14	59.5	38	Ball	2700	MCSF23092A 2092MBL.GN	156-8421
119mm x 119mm x 25mm	230	18	133	46	Ball	2150	DP201AT/2122HBL.GN	960-6580
119mm x 119mm x 38mm	115	18	178	48	Sleeve	2150	SP101A/1123HSL.GN	960-6629
119mm x 119mm x 38mm	230	11	129	38	Sleeve	2150	DP203A/2123LSL.GN	960-6610
119mm x 119mm x 38mm	230	20	178.4	48	Sleeve	2550	DP201A/2123HSL.GN	960-6637
120mm x 120mm x 25mm	115	12.5	79.9	37	Ball	1700	MCSP103AT 1122LBL.GN	156-8422
120mm x 120mm x 25mm	240	13	91.75	40	Ball	1900	MCDP203AT 2122LBL.GN	156-8423
120mm x 120mm x 38mm	115	11	132.5	39	Ball	2300	MCSP103A 1123LBL.GN	156-8424
120mm x 120mm x 38mm	115	20	147.8	45	Ball	2750	MCSP101A 1123HBL.GN	156-8426
120mm x 120mm x 38mm	240	10	122.3	37	Ball	2150	MCDP203A 2123LBL.GN	156-8427
120mm x 120mm x 38mm	240	20	147.8	45	Ball	2750	MCDP201A 2123HBL.GN	156-8428

685453

Mfrs. List No.	Order Code	1+	10+	25+	50+	100+
SF11580AT/1082HBL.GN	960-6530	22.70	20.58	19.36	17.21	15.91
SF23080AT/2082HBL.GN	960-6548	8.08	6.57	5.87	5.21	4.82
MCSF11580A 1083HBL.GN	156-8419	11.15	7.82	7.13	6.85	6.57
SF11580A/1083HSL.GN	960-6599	24.87	22.58	21.34	18.99	17.56
SF23080A/2083HSL.GN	960-6238	28.18	26.39	25.03	23.72	22.37
SF11592A/1092HBL.GN	960-6556	9.35	8.55	7.17	6.56	6.06
SF23092A/2092HBL.GN	960-6564	10.40	9.47	6.46	6.10	5.69
MCSF11592A 1092MBL.GN	156-8420	7.33	7.04	6.77	6.51	6.40
MCSF23092A 2092MBL.GN	156-8421	13.58	12.65	12.03	11.42	11.06
DP201AT/2122HBL.GN	960-6580	8.92	8.15	7.38	6.60	6.19
SP101A/1123HSL.GN	960-6629	6.41	5.94	5.50	5.22	4.81
DP203A/2123LSL.GN	960-6610	20.54	18.62	17.62	15.51	14.74
DP201A/2123HSL.GN	960-6637	8.98	7.05	6.65	6.41	5.89
MCSP103AT 1122LBL.GN	156-8422	12.06	8.02	7.29	7.07	6.85
MCDP203AT 2122LBL.GN	156-8423	10.75	8.08	7.34	6.88	6.75
MCSP103A 1123LBL.GN	156-8424	12.52	8.06	7.81	7.57	7.34
MCSP101A 1123HBL.GN	156-8426	12.52	8.76	7.81	7.57	7.34
MCDP203A 2123LBL.GN	156-8427	12.06	10.76	7.08	6.86	6.64
MCDP201A 2123HBL.GN	156-8428	14.66	13.65	12.97	12.35	11.95

Axial Fan

DC Voltage



- Plastic housing
- Plastic impeller
- Inflammability UL 94V-0
- 300mm Lead wire connections
- Operating temperature from -10°C to +70°C
- Locked rotor protection



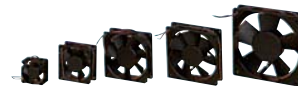
Dimensions (mm)	Voltage V dc	Power Watts	Air Flow cu ft/min	Noise dBA@1m	Bearing Type	Mfrs. List No.	Order Code
80 80 25	24	1.4	37	30	Vapo	MC35346	182-6902
92 92 25	12	1.6	45	32	Vapo	MC35347	182-6903
60 60 15	12	1.92	25.2	36.2	Vapo	MC35349	182-6904
80 80 25	12	1.7	41	33	Vapo	MC35350	182-6905
80 80 25	12	1.7	37	30	Vapo	MC35351	182-6907
80 80 25	12	1.1	33	28	Vapo	MC35352	182-6908
92 92 25	12	1.3	39.5	28	Vapo	MC35353	182-6909
80 80 25	24	1.8	41	33	Vapo	MC35354	182-6910
92 92 25	24	1.3	39.5	28	Vapo	MC35355	182-6911
50 50 10	12	1.32	13.8	31	Vapo	MC35356	182-6912
50 50 15	12	1.74	18.6	40.1	Vapo	MC35357	182-6913
92 92 25	24	1.6	1.274	32	Vapo	MC35348	182-6914

685454

Voltage V dc	Dimensions (mm)	Order Code	1+	10+	25+	50+	100+
12	50 50 15	182-6913	6.08	5.53	5.27	4.66	4.42
12	60 60 15	182-6904	8.37	7.61	7.29	6.44	6.12
12	80 80 25	182-6908	7.44	6.76	6.47	5.71	5.41
12	80 80 25	182-6907	7.81	7.10	6.80	6.00	5.57
12	80 80 25	182-6905	7.59	6.89	6.60	5.82	5.52
12	92 92 25	182-6903	7.59	6.90	6.60	5.83	5.54
12	92 92 25	182-6909	7.59	6.90	6.60	5.83	5.54
24	80 80 25	182-6902	8.91	8.11	7.75	6.85	6.50
24	80 80 25	182-6910	8.91	8.11	7.75	6.85	6.50
24	92 92 25	182-6911	8.91	8.11	7.75	6.85	6.37
24	92 92 25	182-6914	10.43	9.48	9.07	7.68	6.69

Axial Fans

DC Voltage



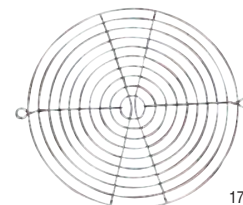
- Plastic housing
- Plastic impeller
- Ball and Sleeve bearing versions
- Lead wire connections
- Patented single coil brushless 8 pole motor
- Locked rotor protection

Dimensions	Voltage V dc	Power Watts	Air Flow cu ft/min	Noise dBA@1m	Bearing Type	Mfrs. List No.	Order Code
40 40 10	5	0.9	7	27	Vapo	MC36256	192-4855
40 40 10	12	1.08	8	32	Vapo	MC36257	192-4856
40 40 20	5	0.7	7.7	21	Sleeve	MC36258	192-4857
50 50 10	5	1.23	11	26	Sleeve	MC36260	192-4858
50 50 10	12	1.44	11	26	Sleeve	MC36261	192-4859
120 120 25	12	5.4	108.2	44.5	Ball	MCEEC0251B2-0000-A99	192-4860
120 120 25	24	3.5	93	40.5	Vapo	MC36276	192-4861
120 120 38	12	9.6	138	48	Sleeve	MC36277	192-4863
120 120 38	24	5.2	116	44	Sleeve	MC36280	192-4864

685455

Voltage V dc	Dimensions	Order Code	1+	10+	25+	50+	100+
5	40 40 10	192-4855	4.17	3.73	3.35	3.00	2.74
12	40 40 10	192-4856	3.83	3.42	3.10	2.73	2.53
5	40 40 20	192-4857	5.43	4.85	4.39	3.89	3.58
5	50 50 10	192-4858	4.34	3.85	3.48	3.10	2.83
12	50 50 10	192-4859	4.00	3.58	3.22	2.85	2.64
12	120 120 25	192-4860	17.30	15.44	13.96	12.36	11.38
24	120 120 25	192-4861	18.10	16.15	14.60	12.92	11.91
12	120 120 38	192-4863	17.30	15.44	13.96	12.36	11.38
24	120 120 38	192-4864	18.24	16.28	14.70	13.03	11.99

Finger Guards and Filters



178-1191



112-4759



178-1185



178-1186



178-1211

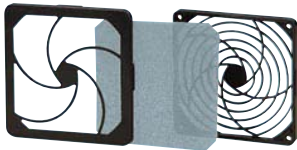


117-1799

685456

Mfrs.		Price Each				
List No.	Order Code	1+	10+	25+	50+	
Finger Guards - Silver Metal						
25mm	MCSC25-W1	178-1178	1.430	1.330	1.290	1.230
30mm	MCSC30-W1	178-1179	1.590	1.420	1.370	1.330
35mm	MCSC35-W1	178-1180	1.730	1.570	1.490	1.440
40mm	MCSC40-W2	178-1181	1.000	0.910	0.880	0.860
50mm	MCSC50-W2	178-1183	1.950	1.780	1.720	1.680
50/62mm	MCSC100-W25	181-2568	2.060	1.850	1.760	1.710
60mm	MCSC60-W2	178-1184	2.040	1.830	1.770	1.720
80mm	MCSC80-W2	178-1185	1.300	1.150	1.110	1.070
92mm	MCSC92-W2	178-1186	1.090	1.030	1.010	1.000
120mm - Centre Disc	MCSC120-W6	178-1188	2.450	2.220	2.130	2.100
120mm	MCSC130-W1	178-1189	3.170	2.710	2.340	2.230
127mm	MCSC130-W3	178-1190	1.610	1.370	1.180	1.130
160mm	MCSC162-W5	178-1191	1.630	1.430	1.400	1.370
254mm	MCSC1000-W1	178-1192	3.760	3.190	2.780	2.670
Finger Guards - Black Metal						
25mm	MCSC25-W1B	178-1193	0.220	0.200	0.185	0.171
30mm	MCSC30-W1B	178-1195	0.210	0.200	0.188	0.179
35mm	MCSC35-W1B	178-1196	0.250	0.230	0.210	0.190
40mm	MCSC40-W2B	178-1197	2.000	1.820	1.740	1.700
50mm	MCSC50-W2B	178-1198	1.430	1.350	1.320	1.300
60mm	MCSC60-W2B	178-1199	2.090	1.880	1.820	1.760
80mm	MCSC80-W2B	178-1201	2.170	1.930	1.870	1.810
92mm	MCSC92-W2B	178-1202	2.390	2.270	2.200	2.170
120mm	MCSC120-W5B	178-1203	2.580	2.280	2.200	2.170
120mm	MCSC120-W6B	178-1204	2.560	2.340	2.240	2.220
254mm	MCSC1000-W1B	178-1207	2.960	2.620	2.320	2.230
Finger Guards - Black Plastic						
40mm	MCSC40-P10	178-1208	1.700	1.540	1.470	1.430
60mm	MCSC60-P10	178-1209	1.820	1.650	1.590	1.530
80mm	MCSC80-P10	178-1210	1.820	1.650	1.480	1.360
80mm - Thin	MCSC80-P40	178-1211	0.660	0.580	0.530	0.480
92mm	MCSC92-P10	178-1213	0.940	0.850	0.790	0.720
119mm	MCSC120-P10	178-1214	1.040	0.940	0.850	0.790
150mm	MCSC162-P10	178-1215	2.710	2.340	2.030	1.900
172mm	MC09651-G	162-9425	6.900	6.510	6.300	5.950
Filters						
60/62mm	PMFA 60L	117-1799	16.090	14.610	13.350	13.130
80mm	PMFA 80	117-1791	17.430	16.230	14.960	14.690
119mm	PMFA120	117-1796	16.680	15.480	14.090	13.740
160mm	PMFA160	117-1808	21.400	19.310	17.610	17.350
Price Per Pack						
			1+	10+	25+	50+
Replacement Filters (5 Per Pack)						
60/62mm	FP 60L	117-1801	1.710	1.530	1.360	1.320
80mm	FP80	117-1797	2.130	1.840	1.730	1.700
119mm	FP120	117-1798	2.530	2.210	2.020	1.980
160mm	FP160	117-1809	3.690	3.270	2.960	2.880

Filter Assemblies



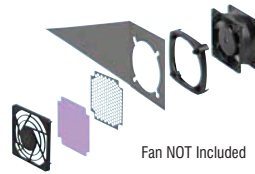
- Assemblies consist of guard, polyurethane foam filter, and media retainer
- Manufactured from **UL94-V0** high impact plastic
- UL Recognised

685457

Fan Size	Mfrs. List No.	Order Code	Price Each/Per Pack				
			1+	10+	25+	50+	100+
Filter Assemblies							
40mm	MCSC40-P15/45	178-1166	2.70	2.47	2.34	2.07	1.98
60mm	MCSC60-P15/45	178-1167	2.46	2.24	2.12	1.91	1.79
80mm	MCSC80-P15/45	178-1168	2.03	1.84	1.75	1.55	1.50
92mm	MCSC92-P15/45	178-1171	2.25	2.07	1.96	1.74	1.68
120mm	MCSC120-P15/45	178-1172	2.44	2.20	2.09	1.86	1.81
150mm	MC09650-F/45	162-9431	0.91	0.88	0.86	0.83	0.81
Replacement Filters (5 Per Pack)							
40mm	MCSC40-M45	178-1173	0.85	0.81	0.76	0.68	0.64
60mm	MCSC60-M45	178-1174	0.80	0.77	0.71	0.64	0.58
80mm	MCSC80-M45	178-1175	1.41	1.36	1.28	1.16	1.07
92mm	MCSC92-M45	178-1176	1.76	1.53	1.43	1.29	1.17
120mm	MCSC120-M45	178-1177	2.30	1.93	1.83	1.63	1.59
150mm	MC09650-M/45	162-9432	1.62	1.49	1.37	1.28	1.19

Fan Vibration Absorber

For Fans from 40mm to 119mm



Fan NOT Included

- Fan Vibration Sleeves reduce noise by up to 9dB
- Fast, simple and safe screwless mounting/re-mounting
- Increased fan life
- Available to fit most manufacturers fans from 40mm to 119mm
- UL Recognised

685458

Fan Size	Order Code	1+	10+	25+	50+	100+
Fan Vibration Sleeves						
40mm	132-6544	0.92	0.89	0.86	0.84	0.82
60mm	132-6546	1.32	1.23	1.15	1.08	1.02
119mm	132-6549	2.82	2.62	2.50	2.31	2.12
Plastic Finger Guard						
40mm	132-6550	1.16	1.07	1.01	0.94	0.85
EMI Filter Shields						
60mm	132-6556	2.72	2.50	2.37	2.18	1.96
92mm	132-6559	4.88	4.40	3.98	3.67	3.38
119mm	132-6560	6.47	6.22	5.93	5.54	5.10
Fan Filter Media						
40mm	132-6561	0.49	0.44	0.42	0.39	0.33
60mm	132-6562	0.45	0.43	0.39	0.38	0.37
80mm	132-6563	0.37	0.36	0.35	0.32	0.30
92mm	132-6564	0.58	0.56	0.54	0.49	0.46
Fan Fixing Rivets						
Rubber	132-6566	0.48	0.43	0.40	0.36	0.32

Potting

ABS



- Low cost, black potting box

Mfrs. List No.	H	W	D	Order Code
PB1	15	30	20	301-176
PB2	20	40	40	301-188
PB3	30	50	50	301-190
PB4	35	70	50	301-206
PB5	25	100	50	301-218

685459

Order Multiple = 10		Price Each				
Mfrs. List No.	Order Code	10+	50+	100+	500+	1K+
PB1	301-176	0.59	0.49	0.47	0.39	0.28
PB2	301-188	0.69	0.65	0.64	0.55	0.45
PB3	301-190	0.96	0.87	0.81	0.76	0.66
Order Multiple = 5		5+	10+	50+	100+	500+
PB4	301-206	1.09	1.04	1.03	0.97	0.73
PB5	301-218	1.05	1.02	1.00	0.99	0.94

Multipurpose

ABS and Polycarbonate



- Designed to IP65 NEMA 4 specification.
- Wall mounting holes and cover attaching screws are outside the sealing area thus preventing ingress of moisture and dust.
- Internal bosses allow mounting of PCB horizontally or connection of terminals etc. into threaded inserts.

- Cover screws are M 4 stainless steel, non-magnetic and fasten into thread brass inserts.
- Recessed area on cover for sticking membrane keyboard.
- ABS in dark grey cover and lid
- Polycarbonate in light grey cover and lid

685460

External Dimensions (mm)		Mfrs.		Price Each			
H	W	D	List No.	Order Code	1+	10+	25+
ABS							
55	100	100	G3101	152-6651	3.91	3.50	3.27
90	100	100	G3103	152-6652	4.55	4.09	3.81
55	120	80	G3107	152-6653	4.03	3.87	3.70
85	120	80	G3109	152-6654	5.30	5.07	4.83
60	240	120	G3118	152-6656	5.30	4.76	4.46
100	240	120	G3121	152-6657	16.90	14.91	13.59
55	200	150	G3122	152-6658	7.18	6.43	6.00
75	200	150	G3127	152-6659	16.55	14.59	13.84
122	353	140	G3130	152-6660	11.32	10.60	10.32
55	190	190	G3125	152-6661	8.02	7.19	6.72

External Dimensions (mm)			Mfrs.		Price Each			
H	W	D	List No.	Order Code	1+	10+	25+	100+
Polycarbonate								
55	100	100	G2100	152-6663	3.20	3.05	2.95	2.92
55	120	80	G2104	152-6665	9.79	8.66	8.46	8.37
100	240	120	G2117	152-6669	10.09	9.05	8.46	7.99
55	200	150	G2119	152-6670	7.89	7.08	6.62	6.21
75	200	150	G2120	152-6671	8.25	7.41	6.94	6.56
55	190	190	G2135	152-6673	7.21	6.85	6.67	6.59

Multipurpose

IP65, ABS



- Easily drilled or punched
- Tongue and groove sealing system with neoprene gasket
- Operating temperature range -20°C to +80°C

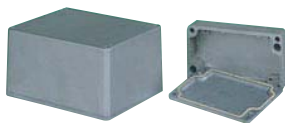


685461

Dimensions (mm)			Order Code	Price Each			
H	W	D		1+	25+	50+	100+
35	64	58	109-4697	4.11	3.76	3.63	3.25
40	115	65	109-4698	7.25	5.76	4.66	4.08
55	115	65	109-4699	8.69	7.42	5.95	5.25
55	115	90	109-4700	6.96	6.35	6.15	5.40
55	171	121	109-4702	11.44	10.07	9.75	8.57
55	222	146	109-4703	13.69	12.52	12.14	10.70
80	115	90	109-4704	12.05	10.40	8.77	7.73
80	171	121	109-4705	10.84	9.91	9.63	8.43
55	195	80	109-4706	13.62	11.77	9.90	9.04
75	222	146	109-4707	8.34	7.61	6.80	6.17
35	52	50	117-5794	4.11	3.76	3.63	3.23
55	82	80	117-5795	6.34	5.79	5.63	5.02
55	160	80	117-5796	8.39	7.65	7.43	6.67
75	200	120	117-5799	13.61	9.50	9.34	8.35
185	265	95	152-6643	14.48	12.36	11.03	9.84
60	120	120	117-5800	8.67	7.91	7.69	6.88
90	120	120	117-5801	10.48	9.14	8.59	7.70
60	160	160	117-5802	12.89	8.69	8.07	7.22
90	160	160	117-5803	12.89	8.69	8.07	7.23
90	240	160	152-6644	11.93	10.19	9.09	8.13
120	240	160	152-6645	23.45	19.83	19.42	18.35
86	300	230	152-6646	22.12	18.87	16.86	15.08
111	300	230	152-6647	18.75	16.00	14.25	12.77
150	360	200	152-6648	42.91	36.29	35.56	33.64

Multipurpose

IP65, Diecast



Wall Thickness 3.3mm

- Diecast aluminium, resistant to moisture and dust ingress.
- Sealed with neoprene gasket. Designed to IP65.
- Mountings and lid fixings outside of seal.
- Integral PCB guide slots (except 109-4718).



685462

External Dimensions			Mfrs. List No.	Order Code	Price Each			
H	W	D			1+	25+	100+	500+
G102	36	90	30	117-5781	7.01	6.43	5.86	5.20
G103	98	64	34	109-4682	7.97	7.69	7.40	6.67
G104	58	64	35	109-4718	11.12	9.03	8.86	8.34
G105	31	55.5	41	NEW 185-7189	6.06	5.45	5.15	4.85
G106	65	115	30	109-4719	8.11	7.71	7.09	6.82
G107	125	80	40	109-4684	14.07	12.20	10.73	9.34
G108	125	80	57	109-4685	15.51	13.91	12.44	10.89
G109	150	63	36.5	109-4686	12.72	11.52	9.56	8.30
G110	52	79.6	74.6	NEW 185-7190	9.63	9.18	8.98	8.77
G111	65	115	55	109-4720	6.02	5.49	4.91	4.45
G112	25.5	102.5	52.5	NEW 185-7191	2.50	2.10	1.82	1.60
G113	90	115	55	109-4721	8.92	8.47	8.09	7.71
G115	108	148	75	117-5782	18.43	16.34	14.98	14.57
G116	160	100	60	109-4687	17.23	15.89	14.73	13.24
G117	160	100	81	109-4689	17.86	16.50	15.33	13.86
G118	60	175	80	NEW 185-7192	7.52	6.35	5.48	4.83
G120	121	171	55	117-5783	18.79	16.62	15.26	14.87
G123	75	200	120	NEW 185-7193	12.14	10.24	8.85	7.80

External Dimensions			Mfrs. List No.	Order Code	Price Each			
H	W	D			1+	25+	100+	500+
G124	55	222	146	152-6683	13.34	11.95	11.20	10.56
G125	82	222	146	152-6685	17.51	15.73	14.71	13.68
G137	120.5	120.5	120.5	152-6684	10.62	9.52	8.92	8.42
G139	158.5	158.5	158.5	152-6687	17.51	15.73	14.71	13.88
G155	90.5	260	160	NEW 185-7194	13.34	11.26	9.73	8.58

Multipurpose

IP65, PC

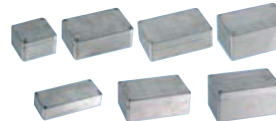


- Polycarbonate boxes sealed to IP65
- Wall mounting holes and lid fixing screws outside sealed area
- Operating temperature range -40°C to +100°C

685463

Dimensions (mm)			Mfrs. List No.	Order Code	Price Each			
H	W	D			1+	25+	50+	100+
G202	35	184	36	152-6675	2.76	2.44	2.20	2.12
G250	50	52	35	117-5784	3.33	2.90	2.74	2.46
G201	58	65	35	109-4690	7.71	6.76	5.96	5.36
G203	65	115	40	109-4691	9.03	7.93	7.00	6.26
G205	65	115	55	109-4692	4.47	3.94	3.47	3.12
G256	80	82	55	117-5785	7.77	6.76	6.38	5.71
G229	55	195	80	152-6676	8.32	7.10	6.34	5.77
G212	90	115	55	109-4693	12.47	10.98	9.71	8.65
G221	90	115	80	109-4708	8.10	7.41	7.18	6.33
G279	120	120	60	117-5791	9.06	8.28	8.04	7.18
G214	121	171	55	109-4694	13.87	12.67	12.27	10.96
G223	121	171	80	109-4709	17.85	15.58	13.07	11.53
G218	146	222	55	109-4696	15.09	13.80	13.36	11.94
G232	146	222	75	109-4710	22.02	19.77	17.29	15.65
G258	160	80	55	117-5787	10.95	9.52	8.98	8.02
G287	160	160	60	117-5792	16.67	15.23	14.76	13.21
G288	160	160	90	117-5793	15.19	13.89	13.46	12.04
G2018	90	240	160	152-6678	14.85	12.68	11.33	10.29
G2025	120	240	160	152-6679	18.44	15.74	14.04	12.79
G238	95	265	185	152-6677	10.41	9.56	9.30	9.22
G2058	150	360	200	152-6682	46.61	39.80	35.52	32.32
G269	200	120	75	117-5789	7.17	6.05	5.23	4.61
G2029	86	300	230	152-6680	34.46	29.42	26.28	23.91
G2038	111	300	230	152-6681	36.57	31.22	27.88	25.35

Die-Cast Aluminium Enclosures



- A range of heavy duty sealed diecast aluminium enclosures
- Natural aluminium colour finish
- Designed to meet IP65 and NEMA4 through the use of neoprene gasket with the universal tongue and groove seal system

- Ideal for industrial environments
- Wall mounting holes and lid fixing screws are outside the sealing area for sealing protection

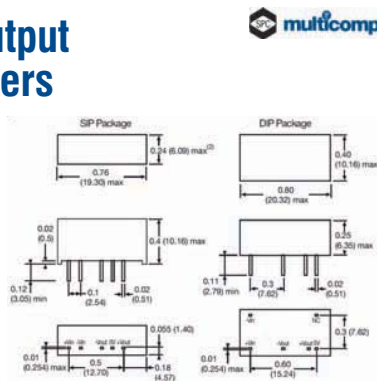
685464

Dimensions (mm)			Mfrs. List No.	Order Code	Price Each			
H	W	D			1+	5+	10+	20+
G101	50	45	30	109-4681	5.56	4.78	4.52	4.17
G103	98	64	34	109-4682	7.97	7.69	7.40	6.67
G107	125	80	40	109-4684	14.07	12.20	10.73	9.34
G108	125	80	57	109-4685	15.51	13.91	12.44	10.89
G109	150	63	36.5	109-4686	12.72	11.52	9.56	8.30
G116	160	100	60	109-4687	17.23	15.89	14.73	13.24
G117	160	100	81	109-4689	17.86	16.50	15.33	13.86

TROUBLESHOOTING TIPS

Chat online to one of our technical engineers at **farnell.com**

1 Watt Dual Output DC/DC Converters



- Short circuit protection
- 1000 VDC Isolation
- Dual Output
- Industry Standard Pinout
- SIP or DIP Package
- 40°C to +85°C Operation

- MTBF > 1.1 Mhrs
- 2 Year Warranty

NEW

Input Range 5V to 24V
Line Regulation 1.2%/1% Δ Vin
Load Regulation 10% 20-100% load change
Ripple & Noise 75 mV pk-pk max, 20 MHz bandwidth

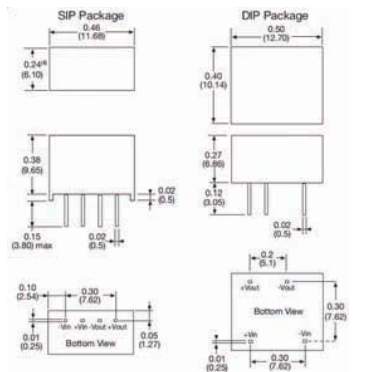
Operating Temperature -40°C to +85°C
Storage Temperature -40°C to +125°C
Isolation Voltage 1000 VDC

Input		Output 1		Output 2		SIP Package	DIP Package
Voltage	Current	Voltage	Current	Voltage	Current	Order Code	Order Code
5V	100mA	5V	-100mA	-5V	-100mA	207-9669	207-9668
5V	42mA	12V	-42mA	-12V	-42mA	207-9671	207-9670
5V	33mA	15V	-33mA	-15V	-33mA	207-9673	207-9672
12V	100mA	5V	-100mA	-5V	-100mA	207-9675	207-9674
12V	42mA	12V	-42mA	-12V	-42mA	207-9678	207-9676
12V	33mA	15V	-33mA	-15V	-33mA	207-9680	207-9679
24V	100mA	5V	-100mA	-5V	-100mA	207-9682	207-9681
24V	42mA	12V	-42mA	-12V	-42mA	207-9684	207-9683
24V	33mA	15V	-33mA	-15V	-33mA	207-9686	207-9685

685591

Mfrs. List No.	Order Code	1+	5+	10+	25+	100+
SIP Package						
MCA05D05S	207-9669	3.81	3.71	3.58	3.42	3.25
MCA05D12S	207-9671	3.81	3.71	3.58	3.42	3.25
MCA05D15S	207-9673	3.81	3.71	3.58	3.42	3.25
MCA12D05S	207-9675	3.81	3.71	3.58	3.42	3.25
MCA12D12S	207-9678	2.61	2.53	2.46	2.39	2.32
MCA12D15S	207-9680	2.54	2.47	2.39	2.33	2.26
MCA24D05S	207-9682	2.54	2.47	2.39	2.33	2.26
MCA24D12S	207-9684	3.81	3.71	3.58	3.42	3.25
MCA24D15S	207-9686	3.81	3.71	3.58	3.42	3.25
DIP Package						
MCA05D05D	207-9668	2.54	2.47	2.39	2.33	2.26
MCA05D12D	207-9670	2.54	2.47	2.39	2.33	2.26
MCA05D15D	207-9672	2.54	2.47	2.39	2.33	2.26
MCA12D05D	207-9674	2.54	2.47	2.39	2.33	2.26
MCA12D12D	207-9676	3.81	3.71	3.58	3.42	3.25
MCA12D15D	207-9679	2.54	2.47	2.39	2.33	2.26
MCA24D05D	207-9681	2.54	2.47	2.39	2.33	2.26
MCA24D12D	207-9683	2.54	2.47	2.39	2.33	2.26
MCA24D15D	207-9685	2.54	2.47	2.39	2.33	2.26

1 Watt Single Output DC/DC Converters



- Industry standard pinout
- 1000 VDC Isolation
- Short circuit protection
- Single Output
- SIP or DIP Package
- 40°C to +85°C Operation
- 2 Year Warranty

Input Range 5V to 24V
Line Regulation 1.2%/1% Δ Vin
Load Regulation 10% 20-100% load change
Ripple & Noise 100 mV pk-pk max, 20 MHz bandwidth
Operating Temperature -40°C to +85°C
Storage Temperature -40°C to +125°C
Isolation Voltage 1000 VDC

NEW

Input Voltage	Output Voltage	Output Current	SIP Package Order Code	DIP Package Order Code
5V	5V	200mA	207-9688	207-9687
5V	12V	84mA	207-9692	207-9691
5V	15V	66mA	207-9694	207-9693
12V	5V	200mA	207-9696	207-9695
12V	12V	84mA	207-9698	207-9697
12V	15V	66mA	207-9700	207-9699
24V	5V	200mA	207-9702	207-9701
24V	12V	84mA	207-9704	207-9703
24V	15V	66mA	207-9706	207-9705

685592

Mfrs. List No.	Order Code	1+	5+	10+	25+	100+
SIP Package						
MCE05S05S	207-9688	3.81	3.71	3.58	3.42	3.25
MCE05S12S	207-9692	3.81	3.71	3.58	3.42	3.25
MCE05S15S	207-9694	2.54	2.47	2.39	2.33	2.26
MCE12S05S	207-9696	2.54	2.47	2.39	2.33	2.26
MCE12S12S	207-9698	3.81	3.71	3.58	3.42	3.25
MCE12S15S	207-9700	3.81	3.71	3.58	3.42	3.25
MCE24S05S	207-9702	3.81	3.71	3.58	3.42	3.25
MCE24S12S	207-9704	3.81	3.71	3.58	3.42	3.25
MCE24S15S	207-9706	3.81	3.71	3.58	3.42	3.25
DIP Package						
MCE05S05D	207-9687	3.81	3.71	3.58	3.42	3.25
MCE05S12D	207-9691	2.54	2.47	2.39	2.33	2.26
MCE05S15D	207-9693	2.54	2.47	2.39	2.33	2.26
MCE12S05D	207-9695	3.81	3.71	3.58	3.42	3.25
MCE12S12D	207-9697	2.54	2.47	2.39	2.33	2.26
MCE12S15D	207-9699	2.54	2.47	2.39	2.33	2.26
MCE24S05D	207-9701	3.81	3.71	3.58	3.42	3.25
MCE24S12D	207-9703	2.54	2.47	2.39	2.33	2.26
MCE24S15D	207-9705	2.54	2.47	2.39	2.33	2.26

10 Watt Single Output Plug-In PSUs



- Energy Star Level V
- CEC 2008 & EISA 2007 Compliant
- Output Voltages from 5 to 24 VDC
- No Load Input Power < 0.3 W
- Compact Dimensions
- UK & EU Plug Versions
- International Safety Approvals
- Output via 2.5mm plug



Input Voltage 90 - 264VAC
Input Frequency 47 - 63 Hz
Efficiency 76% typical
Ripple & Noise 1% pk-pk max, 20 MHz bandwidth
No Load Input Power < 0.3W
Operating Temperature 0°C to +40°C, no derating
Safety Approvals EN60950-1:2001, CE Mark
Emissions EN55022 Level B conducted & radiated

Mfrs. List No.	Output Power	Output Voltage	Output Current	Order Code
UK Plug				
MCPLG5V10WUK	8W	5V	1.6A	182-7440
MCPLG6V10WUK	8W	6V	1.33A	182-7441
MCPLG7V10WUK	8W	7V	1.14A	182-7442
MCPLG9V10WUK	10W	9V	1.11A	182-7444
MCPLG12V10WUK	10W	12V	830mA	182-7445
MCPLG24V10WUK	10W	24V	410mA	182-7446
EU Plug				
MCPLG5V10WEU	8W	5V	1.6A	182-7447
MCPLG6V10WEU	8W	6V	1.33A	182-7448
MCPLG7V10WEU	8W	7.5V	1.14A	182-7449
MCPLG9V10WEU	10W	9V	1.11A	182-7450
MCPLG12V10WEU	10W	12V	830mA	182-7451
MCPLG24V10WEU	10W	24V	410mA	182-7452

685465

Order Code	1+	5+	10+	25+
All Order Codes	11.00	10.67	10.34	9.90

Mini Sim Card Connectors



- Length: 15.7mm
- Width: 16.4mm
- PC Mount Type: SMT
- Contact Resistance: 50mΩ
- Operating Temperature: -40°C to +85°C

NEW

2211802 & 2211803

2211805

685466

No. of Pins	Mfrs. Depth	List No.	Order Code	1+	10+	100+
6	2.6	SIMMP-00601B000-G	221-1802	1.40	0.76	0.62
8	2.6	SIMMP-00801B000-G	221-1803	1.39	0.77	0.63
6	2.8	SIMMP-00601B004-G	221-1805	1.39	0.79	0.65

Micro Sim Card Connectors



NEW



- PC Mount Type: SMT
- Contact Resistance: 50MΩ
- Maximum Voltage: 5V
- Maximum Current: 10mA
- Operating Temperature: -40°C to +85°C

685467

Description	Mfrs. List No.	Order Code	1+	10+
6 Pin with Cover	SIMMP-00601B009-G	221-1806	1.57	0.90
6 Pin with Hinged Cover	SIMMP-00601B201-G	221-1807	1.48	0.85
8 Pin with Hinged Cover	SIMMP-00801B201-G	221-1808	1.91	1.13
6 Pin with Holder	SIMMP-P0610BT00	221-1809	3.01	1.78
8 Pin with Holder	SIMMP-P0810BT00	221-1810	2.90	1.77
6 Pin with Cover	SIMMP-P0605BTR2-0	221-1811	2.34	1.44
8 Pin with Cover	SIMMP-P0805BTR2-0	221-1812	3.44	2.14

Dual Micro Sim Card Connector



NEW



- Length: 17.5mm
- Width: 17.5mm
- Depth: 3.05mm
- Contact Resistance: 50MΩ
- Operating Temperature: -40°C to +85°C
- Mating Cycles: 5000

685468

Mfrs. List No.	Order Code	1+	10+	100+	250+	500+
SIMMP-20805BT01	221-1813	3.38	2.13	1.79	1.37	1.10

SMA Jacks

NEW



- Nominal Impedance: 50Ω
- Working Voltage Max: 500V
- Proof Voltage: 1,000V
- VSWR Max: 1.3
- IP67 waterproofed

685469

Mounting	Mfrs. List No.	Order Code	1+	10+	25+	50+
Front	MC000242	225-3765	7.24	5.48	4.41	4.41
Rear	MC000243	225-3766	7.29	5.52	4.45	4.45
Edge	MC000244	225-3767	6.55	4.80	3.79	3.79

IMPROVED BACK ORDER DELIVERY

Receive email updates with the exact status, due date and despatch information of all your back order items **farnell.com**

N Jack and Adapter



NEW



Mfrs. List No.	Order Code	Frequency Range	Nominal Impedance	Working Voltage Max	Proof Voltage	VSWR	IP Rating
MC000248	225-3773	DC-3GHz	50Ω	335V	750V	1.1 Max @ 500MHz	IP67
MC000245	225-3769	DC-11GHz	50Ω	500V	2,500V	1.3 Max @ 2GHz	IP67

685470

Mfrs. List No.	Order Code	1+	10+	25+	50+
Straight N Jack					
MC000248	225-3773	8.27	6.26	5.04	5.04
N Jack to N Jack Bulkhead Adapter					
MC000245	225-3769	15.97	12.61	10.42	10.42

TNC Plug and Adapter



NEW



Mfrs. List No.	Order Code	1+	10+	25+	50+
Straight TNC Plug					
MC000247	225-3772	6.40	4.70	3.71	3.71
TNC Jack to BNC Jack Bulkhead Adapter					
MC000246	225-3771	14.64	11.56	9.55	9.55

685471

Mfrs. List No.	Order Code	1+	10+	25+	50+
Straight TNC Plug					
MC000247	225-3772	6.40	4.70	3.71	3.71
TNC Jack to BNC Jack Bulkhead Adapter					
MC000246	225-3771	14.64	11.56	9.55	9.55

Plastic D Sub Backshells, Vertical



NEW

MC-DPPK#-K



- Hinged single piece moulding with retaining latches
- Light weight and cost effective
- Long jackscrews with UNC 4-40 thread as standard
- Material: Nylon UL94 V-2
- Temp. range: -55°C to +105°C
- Cable strain relief: Cable clamp with self-tapping screws
- Cable diameter: 3.0 to 11.0 mm

685472

No. of Ways	Mfrs. List No.	Order Code	1+	10+	50+	100+
Black						
9	MC-DPPK9-K	234-6656	1.43	0.76	0.56	0.48
15	MC-DPPK15-K	234-6823	1.54	0.83	0.60	0.52
25	MC-DPPK25-K	234-6824	1.95	1.05	0.76	0.66
37	MC-DPPK37-K	234-6826	1.73	0.98	0.74	0.62
Grey						
9	MC-DPPK9-GREY-K	234-6827	1.43	0.76	0.56	0.48
15	MC-DPPK15-GREY-K	234-6828	1.54	0.83	0.60	0.52
25	MC-DPPK25-GREY-K	234-6829	1.95	1.05	0.76	0.66
37	MC-DPPK37-GREY-K	234-6830	1.73	0.98	0.74	0.62
Red						
9	MC-DPPK9-RED-K	234-6831	1.43	0.76	0.56	0.48
15	MC-DPPK15-RED-K	234-6832	1.54	0.83	0.60	0.52
25	MC-DPPK25-RED-K	234-6833	1.95	1.05	0.76	0.66
37	MC-DPPK37-RED-K	234-6834	1.73	0.98	0.74	0.62
Blue						
9	MC-DPPK9-BLUE-K	234-6835	1.43	0.76	0.56	0.48
15	MC-DPPK15-BLUE-K	234-6836	1.54	0.83	0.60	0.52
25	MC-DPPK25-BLUE-K	234-6838	1.95	1.05	0.76	0.66
37	MC-DPPK37-BLUE-K	234-6839	1.73	0.98	0.74	0.62

No. of Mftrs.		Price Each					
Ways	List No.	Order Code	1+	10+	50+	100+	
Yellow							
9	MC-DPPK9-YELLOW-K	234-6840	1.43	0.76	0.56	0.48	
15	MC-DPPK15-YELLOW-K	234-6841	1.54	0.83	0.60	0.52	
25	MC-DPPK25-YELLOW-K	234-6842	1.95	1.05	0.76	0.66	
37	MC-DPPK37-YELLOW-K	234-6843	1.73	0.98	0.74	0.62	
White							
9	MC-DPPK9-WHITE-K	234-6844	1.43	0.76	0.56	0.48	
15	MC-DPPK15-WHITE-K	234-6845	1.54	0.83	0.60	0.52	
25	MC-DPPK25-WHITE-K	234-6846	1.95	1.05	0.76	0.66	
37	MC-DPPK37-WHITE-K	234-6847	1.73	0.98	0.74	0.62	

Black Plastic D Sub Backshells, Vertical

MC-DTPPK#-K



- Light weight and cost effective
- Re-openable
- Long jackscrews with UNC 4-40 thread as standard
- Material: Polycarbonate UL94 V-0
- Temp. range: -55°C to +105°C
- Cable strain relief: Grommets 4, 5, 7 and 9 mm, Polycarbonate UL94 V-0
- Cable diameter: 3.0 to 13.0 mm

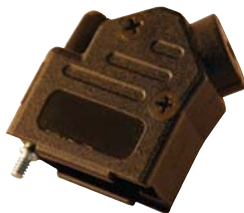
NEW

685473

No. of Mftrs.		Price Each					
Ways	List No.	Order Code	1+	10+	50+	100+	250+
9	MC-DTPPK9-K	234-6848	1.88	1.07	0.80	0.67	0.59
15	MC-DTPPK15-K	234-6851	1.92	1.09	0.83	0.68	0.60
25	MC-DTPPK25-K	234-6852	2.10	1.19	0.90	0.75	0.67
37	MC-DTPPK37-K	234-6853	2.29	1.30	0.98	0.82	0.72

Black Plastic D Sub Backshells, 45°

MC-DVPMK#-K



- Light weight and cost effective
- Re-openable
- Long jackscrews with UNC 4-40 thread as standard
- Material: Polycarbonate UL94 V-0
- Temp. range: -55°C to +105°C
- Cable strain relief: Grommets 4, 5, 7 and 9 mm, Polycarbonate UL94 V-0
- Cable diameter: 3.0 to 13.0 mm

NEW

685474

No. of Mftrs.		Price Each					
Ways	List No.	Order Code	1+	10+	50+	100+	250+
9	MC-DVPMK9-K	234-6854	1.72	0.97	0.74	0.62	0.54
15	MC-DVPMK15-K	234-6855	1.90	1.07	0.81	0.68	0.60
25	MC-DVPMK25-K	234-6856	2.14	1.21	0.91	0.77	0.68
37	MC-DVPMK37-K	234-6857	2.97	1.69	1.27	1.06	0.94

Metalized D Sub Backshells, Vertical

MC-DTPMK#-K



- Minimise interference from electromagnetic and RF sources
- Non-static parts avoid ESD problems
- Accept round foil and braided cable types
- Approved according VDE 0871, FCC 20780 and 89/336/EU
- Long jackscrews with UNC 4-40 thread as standard
- Material: ABS Plastic, Ni-plated
- Temp. range: -40°C to +110°C
- Cable strain relief: Polycarbonate, PC UL94 V-0
- Cable diameter: 3.0 to 13.0 mm

NEW

685475

No. of Mftrs.		Price Each					
Ways	List No.	Order Code	1+	10+	50+	100+	250+
9	MC-DTPMK9-K	234-6858	2.88	1.64	1.24	1.03	0.91
15	MC-DTPMK15-K	234-6859	3.24	1.84	1.39	1.16	1.02
25	MC-DTPMK25-K	234-6860	3.82	2.17	1.64	1.36	1.20
37	MC-DTPMK37-K	234-6861	4.24	2.40	1.81	1.51	1.33

Metalized D Sub Backshells, 45°

MC-DVPMK#-K



- Minimise interference from electromagnetic and RF sources
- Non-static parts avoid ESD problems
- Accept round foil and braided cable types
- Approved according VDE 0871, FCC 20780 and 89/336/EU
- Long jackscrews with UNC 4-40 thread as standard
- Material: ABS Plastic, Ni-plated
- Temp. range: -40°C to +110°C
- Cable strain relief: Polycarbonate, PC UL94 V-0
- Cable diameter: 3.0 to 13.0 mm

- Attenuation factor: > 40 dB between 30 MHz and 1 GHz

685476

No. of Mftrs.		Price Each					
Ways	List No.	Order Code	1+	10+	50+	100+	250+
9	MC-DVPMK9-K	234-6863	2.98	1.70	1.28	1.06	0.94
15	MC-DVPMK15-K	234-6864	3.51	2.00	1.50	1.26	1.11
25	MC-DVPMK25-K	234-6865	3.99	2.27	1.70	1.43	1.25
37	MC-DVPMK37-K	234-6866	4.51	2.56	1.92	1.61	1.41

Waterproof M12 Connectors and Cable Assemblies



- Current Rating - 2A or 5A
- Corrosion - 48 Hrs Salt Spray Contact
- IP68 Panel Mount Sockets / IP67 PVC Cable Assemblies
- Durability - 500 cycles min.
- Contacts - Copper Alloy, Gold plated
- Connector Material - Nylon + GF
- Black PVC Cable
- Connector Temperature Range = -40°C to +100°C
- Cable Temperature Range = -20°C to +80°C

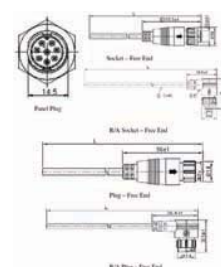
685477

Current Rating	No. of Ways	Order Code	1+	10+	25+	50+
Rear Panel Mount Sockets, IP68						
5A	3	186-0758	3.41	3.01	2.69	2.44
5A	4	186-0759	8.45	7.69	6.82	5.81
5A	5	186-0760	4.33	3.82	3.41	3.10
2A	8	186-0761	7.43	6.78	6.07	5.50
Front Panel Mount Sockets, IP68						
5A	3	186-0762	3.15	2.86	2.62	2.41
5A	4	186-0763	3.94	3.48	3.11	2.81
5A	5	186-0764	4.01	3.54	3.17	2.87
2A	8	186-0765	4.88	4.31	3.85	3.49
Cable Assemblies, M12 Plug - Free End, Length = 1M, IP67						
5A	3	186-0766	2.02	1.79	1.60	1.45
5A	4	186-0767	2.52	2.22	2.00	1.80
5A	5	186-0769	2.71	2.39	2.14	1.94
2A	8	186-0771	3.63	3.20	2.87	2.59
Cable Assemblies, R/A, M12 Plug - Free End, Length = 1M, IP67						
5A	3	186-0772	1.56	1.51	1.47	1.42
5A	4	186-0773	2.17	1.96	1.80	1.65
5A	5	186-0774	2.54	2.24	2.01	1.82
2A	8	186-0775	3.57	3.15	2.82	2.55

Miniature Waterproof Connectors and Cable Assemblies - IP67



- Current Rating - 2A, 5A or 10A
- Corrosion - 48 Hrs Salt Spray Contact
- Durability - 500 cycles min.
- Contacts - Copper Alloy, Gold plated
- Connector Material - Nylon + GF
- Black PVC Cable
- Connector Temperature Range = -40°C to +100°C
- Cable Temperature Range = -20°C to +80°C



685478

Current Rating	No. of Ways	Order Code	Price Each			
			1+	10+	25+	50+
Panel Plugs, IP67						
2A	10	186-0678	1.66	1.46	1.30	1.19
2A	12	186-0679	1.91	1.69	1.51	1.37
5A	4	186-0680	2.18	2.00	1.75	1.49
5A	5	186-0681	2.44	2.21	1.97	1.67
5A	6	186-0682	1.23	1.09	0.97	0.87
5A	7	186-0683	1.26	1.15	1.04	0.97
5A	8	186-0684	1.60	1.42	1.27	1.15
10A	2	186-0685	1.71	1.57	1.39	1.19
10A	3	186-0686	2.31	2.10	1.86	1.59
10A	4	186-0687	1.20	1.07	0.96	0.86
Dust Caps for Panel Plugs						
Screw Cap		186-0688	0.68	0.61	0.55	0.47
Snap-In Cap		186-0691	0.37	0.33	0.28	0.23
Cable Assemblies, Socket - Free End, Length = 1M						
2A	10	186-0692	4.54	4.01	3.59	3.25
2A	12	186-0693	4.98	4.43	4.00	3.64
5A	4	186-0694	5.81	5.27	4.67	3.97
5A	5	186-0695	2.24	2.18	2.11	2.05
5A	6	186-0696	3.57	3.16	2.83	2.55
5A	7	186-0697	3.54	3.21	2.93	2.70
5A	8	186-0698	4.11	3.62	3.24	2.93
10A	2	186-0699	4.78	4.35	3.85	3.27
10A	3	186-0700	2.80	2.48	2.21	2.01
10A	4	186-0701	3.23	2.85	2.55	2.31
Cable Assemblies, R/A, Socket - Free End, Length = 1M						
2A	10	186-0702	4.19	3.80	3.48	3.20
2A	12	186-0703	4.87	4.42	4.04	3.72
5A	4	186-0704	1.91	1.85	1.80	1.75
5A	5	186-0705	6.68	6.07	5.38	4.58
5A	6	186-0706	2.58	2.50	2.43	2.36
5A	7	186-0708	3.08	2.79	2.55	2.35
5A	8	186-0709	3.16	3.07	2.98	2.89
10A	2	186-0710	2.17	1.92	1.72	1.55
10A	3	186-0711	2.67	2.36	2.10	1.91
10A	4	186-0712	3.03	2.75	2.52	2.31
Cable Assemblies, Plug - Free End, Length = 1M						
2A	10	186-0713	2.44	2.22	2.03	1.87
2A	12	186-0714	2.43	2.25	2.10	1.96
5A	4	186-0715	1.42	1.37	1.33	1.30
5A	5	186-0716	1.76	1.59	1.46	1.34
5A	6	186-0717	5.72	5.20	4.61	3.92
5A	7	186-0718	1.95	1.82	1.71	1.61
5A	8	186-0721	2.40	2.18	1.99	1.83
10A	2	186-0722	1.55	1.37	1.23	1.11
10A	3	186-0723	1.47	1.33	1.22	1.12
10A	4	186-0724	2.21	2.00	1.84	1.69
Cable Assemblies, R/A, Plug - Free End, Length = 1M						
2A	10	186-0725	2.16	1.98	1.84	1.72
2A	12	186-0726	2.79	2.52	2.31	2.13
5A	4	186-0727	1.52	1.37	1.25	1.15
5A	5	186-0728	1.76	1.59	1.46	1.34
5A	6	186-0729	1.99	1.80	1.65	1.52
5A	7	186-0730	2.16	1.98	1.83	1.71
5A	8	186-0731	2.40	2.18	1.99	1.83
10A	2	186-0733	1.25	1.13	1.03	0.95
10A	3	186-0734	1.38	1.29	1.22	1.16
10A	4	186-0735	1.66	1.54	1.42	1.33

Miniature Waterproof Panel Sockets & Plug Cable Assemblies



- Current Rating - 10A
- IP Rating - IP67 (Screw Lock), IP55 (Bayonet Lock)
- Contacts - Phosphor Bronze, Gold plated
- Connector Material - Nylon + GF
- Black PVC Cable
- Temperature Range = -40°C to +100°C (Screw Lock), -20°C to +80°C (Bayonet Lock)

**NEW**

685479

Current Rating	No. of Ways	Order Code	1+	10+	25+	50+
Panel Plug, Screw Lock, IP67						
10A	3	186-0736	1.38	1.25	1.10	0.91
Cable Assemblies, Plug - Free End, Length = 1M, Screw Lock, IP67						
10A	3	186-0738	2.29	2.03	1.82	1.65
Square Panel Socket, Bayonet Lock, IP55						
10A	3	186-0737	1.74	1.69	1.64	1.59
Cable Assemblies, Plug - Free End, Length = 1M, Bayonet Lock, IP55						
10A	3	186-0739	2.50	2.26	2.07	1.89

Waterproof Connectors and Cable Assemblies - IP67



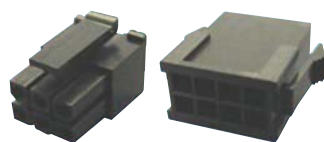
- Current Rating - 5A or 16A
- Corrosion - 48 Hrs Salt Spray Contact
- Durability - 500 cycles min.
- Contacts - Brass, Gold plated
- Connector Material - Nylon + GF
- Black PVC Cable
- Connector Temperature Range = -40°C to +100°C
- Cable Temperature Range = -20°C to +80°C

685480

Current Rating	No. of Ways	Order Code	Price Each			
			1+	10+	25+	50+
Panel Plugs, IP67						
5A	7	186-0740	1.390	1.220	1.090	0.990
5A	8	186-0741	3.260	2.970	2.630	2.230
5A	9	186-0742	1.460	1.330	1.220	1.120
16A	3	186-0743	1.220	1.080	0.970	0.870
Cable Assemblies, Socket - Free End, Length = 1M						
5A	7	186-0748	3.980	3.510	3.140	2.850
5A	8	186-0749	3.240	3.150	3.050	2.970
5A	9	186-0750	4.900	4.320	3.860	3.500
16A	3	186-0751	3.670	3.330	3.050	2.810
Cable Assemblies, Plug - Free End, Length = 1M						
5A	7	186-0753	2.160	2.000	1.870	1.760
5A	8	186-0754	2.660	2.390	2.180	1.990
5A	9	186-0755	2.730	2.650	2.570	2.500
16A	3	186-0757	5.250	4.770	4.360	4.020
Panel Mount Socket, IP67						
16A	3	186-0745	1.400	1.270	1.160	1.070
Cable Assembly, Plug - Free End, Length = 1M						
16A	3	186-0752	2.310	2.100	1.930	1.780
Dust Caps for Panel Plugs & Sockets						
Screw Cap		186-0746	0.810	0.740	0.660	0.560
Snap-In Cap		186-0747	0.161	0.142	0.127	0.115

3.0mm Plug & Receptacle Housings

5560 / 5561 series



- 3.0mm grid spacing
- Dual Row
- Flammability rating - UL 94V-0

Receptacle Housing		Plug Housing		Current Rating	Voltage Rating	Operating Temperature
Housing Material	Contact Plating					
Nylon 6,6	Tin Plated			5A	250V	-25°C to 105°C

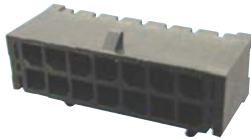
685481

Mfrs. List No.	No. of Ways	Order Code	Price Each				
			10+	100+	250+	500+	1K+
Free Hanging Receptacles							
MC34583	2	157-8562	0.260	0.200	0.148	0.124	0.101
MC34585	4	157-8563	0.080	0.073	0.068	0.064	0.059
MC34587	6	157-8564	0.440	0.350	0.240	0.210	0.166
MC34589	8	157-8565	0.101	0.092	0.084	0.079	0.074
MC34591	10	157-8566	0.110	0.101	0.092	0.086	0.080
MC34571	12	157-8567	0.520	0.430	0.330	0.240	0.200
MC34573	14	157-8568	0.179	0.157	0.140	0.126	0.115

Mfrs. List No.	No. of Ways	Order Code	Price Each				
			10+	100+	250+	500+	1K+
Free Hanging Receptacles							
MC34845	16	157-8569	0.184	0.161	0.144	0.130	0.119
MC34847	18	157-8570	0.134	0.124	0.116	0.109	0.103
MC34575	20	157-8572	0.690	0.550	0.420	0.340	0.280
Panel Mount Plugs							
MC34593	2	157-8573	0.130	0.114	0.103	0.091	0.084
MC34595	4	157-8574	0.150	0.131	0.119	0.108	0.097
MC34599	8	157-8576	0.640	0.520	0.400	0.310	0.250
MC34601	10	157-8577	0.500	0.450	0.370	0.320	0.270
MC34577	12	157-8578	0.109	0.101	0.095	0.089	0.084
MC34579	14	157-8579	0.080	0.071	0.064	0.058	0.054
MC34841	16	157-8580	0.158	0.145	0.133	0.124	0.117
MC34843	18	157-8581	0.139	0.135	0.131	0.127	0.124
MC34581	20	157-8582	0.153	0.143	0.133	0.125	0.118
Crimp Pin			100+	500+	1K+	2K5+	5K+
2261(5561)T	20 - 24 AWG	157-8642	0.059	0.047	0.017	0.013	0.011
Crimp Socket							
2260(5560)T	20 -24 AWG	157-8643	0.059	0.047	0.017	0.013	0.011

3.0mm Vertical & Right Angle Headers

5561S / 5561R series



- Orientation - Vertical and Right Angle Headers available
- 3.0mm grid spacing
- Dual Row
- Flammability rating - UL 94V-2
- 5561S & 5561R mate with Receptacle Housings 5560

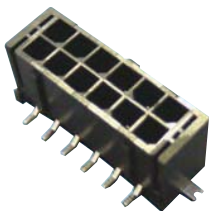
Housing Material	Contact Material	Contact Plating	Current Rating	Voltage Rating	Operating Temperature
Nylon 4,6	Copper	Tin	5A	250V	-25°C to 105°C

685482

Mfrs. List No.	No. of	Order Code	Price Each				
	Ways		10+	100+	250+	500+	1K+
Vertical Headers							
MC34715	2	157-8584🟢	0.850	0.730	0.610	0.530	0.520
MC34329	4	157-8585🟢	0.220	0.200	0.180	0.164	0.138
MC34331	6	157-8586🟢	0.660	0.550	0.400	0.310	0.260
MC34333	8	157-8587🟢	0.220	0.200	0.181	0.163	0.148
MC34335	10	157-8588🟢	0.155	0.136	0.122	0.109	0.100
MC34705	12	157-8589🟢	0.730	0.590	0.460	0.360	0.300
MC34707	14	157-8590🟢	0.112	0.105	0.098	0.092	0.086
MC34849	16	157-8591🟢	0.183	0.178	0.173	0.168	0.163
MC34851	18	157-8592🟢	0.045	0.043	0.040	0.038	0.036
MC34327	20	157-8593🟢	0.108	0.101	0.094	0.088	0.083
Right Angle Headers							
MC34337	2	157-8594🟢	0.620	0.480	0.430	0.410	0.390
MC34717	4	157-8596🟢	0.790	0.610	0.550	0.520	0.500
MC34339	6	157-8597🟢	1.030	0.810	0.730	0.690	0.650
MC34341	8	157-8598🟢	0.115	0.111	0.108	0.105	0.102
MC34343	10	157-8599🟢	0.196	0.172	0.154	0.139	0.125
MC34709	12	157-8600🟢	0.189	0.173	0.159	0.148	0.139
MC34711	14	157-8602🟢	0.108	0.105	0.102	0.099	0.096
MC34853	16	157-8603🟢	0.950	0.790	0.590	0.460	0.390

3.0mm Vertical & Right Angle SMT Headers

5561S-SM1 / 5561R-SM1 series



- Orientation - Vertical and Right Angle Headers available
- Mounting Type - SMT
- 3.0mm grid spacing
- Headers come with metal tabs
- Dual Row
- Flammability rating - UL 94V-2
- 5561S-SM1 & 5561R-SM1 mate with Receptacle Housings 5560

Housing Material	Contact Material	Contact Plating	Current Rating	Voltage Rating	Operating Temperature
High Temp. Plastic	Copper	Tin	5A	250V	-25°C to 105°C

685483

Mfrs. List No.	No. of	Order Code	Price Each				
	Ways		10+	100+	250+	500+	1K+
Vertical Headers							
MC34857	2	157-8606	0.240	0.220	0.195	0.177	0.148
MC34859	4	157-8607	1.360	1.050	0.950	0.910	0.880
MC34861	6	157-8608	0.195	0.172	0.157	0.144	0.133
MC34863	8	157-8609	1.230	1.000	0.920	0.890	0.860
2261(5561)S-10T-SM1	10	157-8610	0.230	0.210	0.191	0.175	0.162
2261(5561)S-12T-SM1	12	157-8611	0.320	0.270	0.240	0.210	0.197
MC34865	14	157-8612	0.167	0.162	0.157	0.153	0.149
2261(5561)S-16T-SM1	16	157-8614	0.270	0.250	0.240	0.220	0.210
MC34867	18	157-8615	0.114	0.105	0.097	0.090	0.084
MC34869	20	157-8616	0.210	0.200	0.198	0.192	0.187
Right Angle Headers							
MC34871	2	157-8617	0.189	0.176	0.164	0.154	0.145
MC34873	4	157-8618	0.730	0.670	0.590	0.520	0.420
MC34875	6	157-8620	0.200	0.195	0.189	0.184	0.179
MC34877	8	157-8621	0.270	0.230	0.210	0.186	0.170
MC34879	10	157-8622	0.610	0.560	0.500	0.450	0.380
MC34881	12	157-8623	0.420	0.370	0.340	0.290	0.260
MC34885	16	157-8626	0.490	0.450	0.410	0.390	0.360
2261(5561)R-18T-SM1	18	157-8627	0.210	0.192	0.177	0.165	0.153
MC34887	20	157-8628	0.500	0.460	0.420	0.390	0.370

3.0mm Plug & Receptacle Housings

5560A / 5561A series



- 3.0mm grid spacing
- Single Row
- Housings have mounting ears
- Flammability rating - UL 94V-0

Receptacle Housing	Plug Housing
Housing Material Nylon 6,6	Contact Plating Tin Plated
Current Rating 5A	Voltage Rating 250V
Operating Temperature -25°C to 105°C	

685484

Mfrs. List No.	No. of	Order Code	Price Each				
	Ways		10+	100+	250+	500+	1K+
Free Hanging Receptacles							
MC34539	2	157-8629	0.280	0.210	0.165	0.139	0.117
MC34541	3	157-8630	0.380	0.280	0.210	0.159	0.134
MC34543	4	157-8631	0.280	0.240	0.195	0.159	0.132
Panel Mount Plugs							
MC34545	2	157-8632	0.092	0.081	0.073	0.066	0.060
MC34547	3	157-8633	0.270	0.210	0.179	0.143	0.127
2261(5561)A-04	4	157-8634	0.080	0.077	0.075	0.073	0.071
Crimp Pin			100+	500+	1K+	2K5+	5K+
2261(5561)T	20 - 24 AWG	157-8642	0.059	0.047	0.017	0.013	0.011
Crimp Socket							
2260(5560)T	20 - 24 AWG	157-8643	0.059	0.047	0.017	0.013	0.011

3.0mm Vertical & Right Angle Headers

5561SA / 5561RA series



- Orientation - Vertical and Right Angle Headers available
- 3.0mm grid spacing
- Single Row
- Flammability rating - UL 94V-2
- 5561SA & 5561RA mate with Receptacle Housings 5560A

Housing Material	Contact Material	Contact Plating	Current Rating	Voltage Rating	Operating Temperature
Nylon 4,6	Copper	Tin	5A	250V	-25°C to 105°C

685485

Mfrs. List No.	No. of	Order Code	Price Each				
	Ways		10+	100+	250+	500+	1K+
Vertical Headers							
2261(5561)SA-02	2	157-8635	0.400	0.330	0.220	0.188	0.160
2261(5561)SA-03	3	157-8636	0.187	0.160	0.131	0.106	0.083
2261(5561)SA-04	4	157-8638	0.056	0.052	0.048	0.045	0.042
Right Angle Headers							
2261(5561)RA-02	2	157-8639	0.050	0.046	0.042	0.039	0.037
2261(5561)RA-03	3	157-8640	0.410	0.390	0.330	0.290	0.270
2261(5561)RA-04	4	157-8641	0.065	0.062	0.061	0.060	0.057

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Wire Stripper Super No 5

DURATOOL


- Automatic wire stripper for all common stranded and solid conductors of 0,2 to 6,0 mm² (24-10 AWG).
- Adjustable length strip of 5 to 12 mm (removable of required).
- Easily accessible built-in side cutter for max 2mm \varnothing

685593

Mfrs.			Price Each		
List No.	Order Code		1+	+	+
D01022	169-6726		20.67	19.62	18.90

ESD Desoldering Pump

DURATOOL


- Metal body with 7.7cm³ volume
- ESD compliant
- Electrical resistance 10⁵ OHM
- Heat resistant & conductive carbon fibre nozzle

685400

Mfrs.			Price Each		
List No.	Order Code		1+	5+	10+
Desoldering Pump, ESD	D01699	179-2724	11.58	11.15	10.95
Replacement nozzle, ESD	D01700	179-2725	3.24	3.13	3.07

Desoldering Pump

DURATOOL


- Metal construction
- Anti-static tip

685401

Description	Length (mm)	Order Code	1+
Desoldering pump	162	312-5634	4.07
Desoldering pump	195	312-5646	4.95
Accessories			
Spare tip		312-7709	1.69

Tip Cleaner

DURATOOL


- Contents made of low abrasive brass shavings
- No water or messy wet sponges necessary
- No temperature drop as in conventional sponges
- Anti-slip pad on the base and an integral adjustable soldering iron rest
- Two concave indents on the top rim
- Dimensions (Dia. x H): \varnothing 82x30mm

685402

Description	Order Code	1+	5+
Tip Cleaner	146-7280	6.12	5.98

Portable Vacuum Pick-Up Tool

DURATOOL


- For use with static sensitive components
- Easily handles small flat parts with a touch of a button
- Ideal tool for the handling of SMDs and other delicate components
- Self-contained vacuum. No hoses and batteries required
- Storage for the probes and cups in the handle (132mm)
- The hand-held SMD vacuum pick up tool is ideal for picking up and moving large or small electronic components
- Lightweight, portable and suitable for the picking and placing of small components weighing up to 50 grams and having a flat surface, DIL packages and surface mount components, etc. And its new high-power probes have longer holding action
- Supplied with 3 angled and 3 straight pick-up hands with a choice 4mm, 6mm or 10mm cap diameters

685403

Description	Order Code	Price Each	
		1+	10+
Vacuum Pick-Up Tool	151-6350	5.24	4.77

Helping hand

DURATOOL


- Allows a PCB or any delicate or small work item to be held in position using the two crocodile clips
- The user can keep both hands free for positioning, soldering and assembling

685404

Order Code	Price Each
1+	
312-5350	6.03

PLCC Extractor

DURATOOL


- A spring assisted clip carrier extraction tool, specially designed for the safe removal of PLCCs from their sockets without damage to component parts

685405

Order Code	Price Each
1+	
312-5361	3.55



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(compatible with iPad and Android Tablet devices)

Precision Tweezer Set

5-Pieces, Budget Range

DURATOOL


- The 5 most used precision tweezers supplied in a practical plastic wallet
- in anti-magnetic stainless steel (SA)

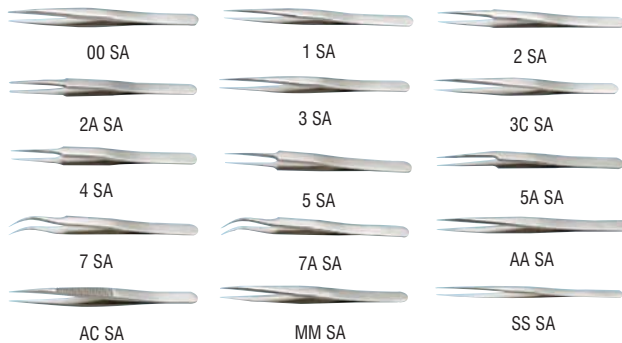
Typ	Description	Total length
00 SA	Tweezers with flat, strong tips	120mm
2A SA	Tweezers with flat, rounded tips	120mm
3C SA	Tweezers with very sharp tips	110mm
5 SA	Tweezers with very fine tips	110mm
7 SA	Tweezers with fine, bent tips	110mm

685406

Order Code	Price Each		
	1+	5+	10+
130-6402	32.40	32.05	30.86

Precision Tweezers

Budget Range

DURATOOL


- A budget range of precision tweezers
- quality controlled
- in anti-magnetic stainless steel (SA)
- packaged in a practical plastic wallet
- wide choice of shapes for a large variety of industrial applications

Mfrs. List No.	Model	Description	Length	
			inches	mm
D00334	00 SA	Flat edges, thick	4 3/4	120
D00335	1 SA	Accurate, strong tips	4 3/4	120
D00337	2 SA	Flat, sharp fine tips	4 3/4	120
D00337	2A SA	Flat, round tip	4 3/4	120
D00338	3 SA	Very sharp tips	4 3/4	120
D00339	3C SA	Very sharp tips, superior finish	4 1/4	110
D00340	4 SA	Fine tips	4 1/4	110
D00341	5 SA	Extra fine tips	4 1/2	115
D00342	5A SA	Extra fine tips	4 1/2	115
D00343	7 SA	Fine curved tips	4 1/2	115
D00344	7A SA	Fine strong curved tips	4 1/2	115
D00345	AA SA	Strong tips for general use	5	130
D00346	AC SA	Strong tips, serrated grips	4 1/4	110
D00347	MM SA	General purpose, strong fine tips	5	130
D00348	SS SA	Super slim, extra fine	5 1/2	140

685407

Mfrs. List No.	Tweezers Model	Order Code	Price Each		
			1+	5+	10+
D00334	00 SA	130-6385	7.05	6.96	6.73
D00335	1 SA	130-6386	7.05	6.96	6.73
D00336	2 SA	130-6387	7.05	6.96	6.73
D00337	2A SA	130-6389	7.05	6.96	6.73
D00338	3 SA	130-6391	7.05	6.96	6.73
D00339	3C SA	130-6392	7.05	6.96	6.73
D00340	4 SA	130-6393	7.74	7.68	7.40
D00341	5 SA	130-6394	7.74	7.68	7.40
D00342	5A SA	130-6395	7.74	7.68	7.40
D00343	7 SA	130-6396	7.74	7.68	7.40
D00344	7A SA	130-6397	7.74	7.68	7.40
D00345	AA SA	130-6398	5.36	5.31	5.10
D00346	AC SA	130-6399	7.59	7.53	7.25
D00347	MM SA	130-6400	5.36	5.31	5.10
D00348	SS SA	130-6401	7.05	6.96	6.73

Precision Tweezer Sets

ESD-conductive

DURATOOL


161-7215
(includes: 3.SA; 7A.SA;
12.SA.SMD; 13.SA.SMD)



161-7216
(includes: 3.SA; 5.SA; 7A.SA;
12.SA.SMD; 13.SA.SMD)



161-7218
(includes: 3.SA; 3C.SA; 5.SA;
7A.SA; 12.SA.SMD; 13.SA.SMD)

- The Set contains the most used precision tweezers
- Made of Anti-Magnetic Anti-Acid stainless Steel with ESD polyester epoxy coating ($10^5 - 10^6$ ohm)
- Comfortable handling and insertion of SMD components

Mfrs. List No.	Type	Description	length
D00831	3.SA ESD	Sharp Tweezers	120
D00832	3C.SA ESD	Sharp Tweezers	110
D00833	5.SA ESD	Fine Tips Tweezers	110
D00834	7A.SA ESD	Fine Curved Tweezers	115
D00836	12.SA.SMD	SMD Tweezers for handling and positioning 2 and 3 lead SOT 45° bent	120
D00837	13.SA SMD	SMD Tweezers for handling and positioning 1mm components	120

685408

Mfrs. List No.	Order Code	Price Each		
		1+	5+	10+
D00838	161-7215	36.84	36.46	34.60
D00839	161-7216	45.51	45.04	42.71
D00840	161-7218	53.10	52.55	49.84

ESD Black Coating Tweezers

DURATOOL


2SA.SA ESD

3C.SA ESD

7A.SA ESD

12.SA.SMD



3.SA ESD

5.SA ESD

AA.SA ESD

13.SA.SMD

- Manufactured from Anti-Magnetic Anti-Acid stainless Steel with ESD polyester epoxy coating ($10^5 - 10^6$ Ohm)
- Specifically intended for a smooth handling and positioning of most SMD components
- Accurate symmetry and balance
- Fine polished, mat anti-glare finish

Mfrs. List No.	Model	Description	Length mm
D00830	2A.SA ESD	Flat Round Tweezers	120
D00831	3.SA ESD	Sharp Tweezers	120
D00832	3C.SA ESD	Sharp Tweezers	110
D00833	5.SA ESD	Fine Tips Tweezers	110
D00834	7A.SA ESD	Fine Curved Tweezers	115
D00835	AA.SA ESD	Straight Fine Tweezers	130
D00836	12.SA.SMD	SMD Tweezers for handling and positioning 2 and 3 lead SOT 45° bent	120
D00837	13.SA SMD	SMD Tweezers for handling and positioning 1mm components	120

685409

Mfrs. List No.	Order Code	Price Each		
		1+	5+	10+
D00830	161-6325	10.03	9.89	9.52
D00831	161-6326	10.03	9.89	9.52
D00832	161-6327	10.03	9.89	9.39
D00833	161-6329	10.63	10.50	10.10
D00834	161-6331	10.63	10.50	10.10
D00835	161-6332	8.62	8.50	8.19
D00836	161-6333	10.99	10.89	10.33
D00837	161-6334	10.99	10.89	10.50

Electronic Professional Side Cutters

The Best Cutters You'll Ever Use

DURATOOL



- High quality ball bearing steel
- 63 - 65 Rockwell Hardness (HRC)
- 2-Component ESD Ergonomic handles, soft comfortable gripping surface, hard plastic core
- Dual leaf springs in blue steel
- Matched bearing rings to minimize metal-metal contact and friction
- Lap joint with screw to achieve a high level of strength and precision
- Static dissipative ($10^6 - 10^8 \Omega/\text{sq.}$), oil, grease and wear-resistant
- All cutters available with three types of cutting blades:
 - Semi-flush: for soft and hard wire
 - Flush: for very precise cutting of soft wire
 - Full-flush: for a perfect cutting of soft wire

Head Size	Cut Type	Cutting Capacity	Overall length inch	mm	Mfrs. List No.	Order Code
Oval Head						
S	Semi Flush	0.2 - 1.2 mm	4.8"	123	D00998	169-6510
S	Flush	0.1 - 1.2 mm	4.8"	123	D00999	169-6511
S	Full Flush	0.1 - 1.0 mm	4.8"	123	D01000	169-6512
L	Semi Flush	0.3 - 1.6 mm	4.9"	125	D01001	169-6513
L	Flush	0.2 - 1.6 mm	4.9"	125	D01002	169-6514
L	Full Flush	0.2 - 1.2 mm	4.9"	125	D01003	169-6515

Tapered Head						
S	Semi Flush	0.2 - 1.2 mm	4.8"	123	D01004	169-6516
S	Flush	0.1 - 1.2 mm	4.8"	123	D01005	169-6517
S	Full Flush	0.1 - 1.0 mm	4.8"	123	D01006	169-6519
L	Semi Flush	0.3 - 1.6 mm	4.9"	125	D01007	169-6521
L	Flush	0.2 - 1.6 mm	4.9"	125	D01008	169-6522
L	Full Flush	0.2 - 1.2 mm	4.9"	125	D01009	169-6523

Tapered & Relieved Head						
S	Semi Flush	0.2 - 1.0 mm	4.8"	123	D01010	169-6524
S	Flush	0.1 - 1.0 mm	4.8"	123	D01011	169-6525
S	Full Flush	0.1 - 0.8 mm	4.8"	123	D01012	169-6526

686046

Mfrs. List No.	Head Size	Cut Type	Order Code	1+	5+	10+
Oval Head						
D00998	S	Semi Flush	169-6510	26.35	23.77	23.62
D00999	S	Flush	169-6511	27.03	24.36	24.22
D01000	S	Full Flush	169-6512	27.64	24.92	24.78
D01001	L	Semi Flush	169-6513	27.00	24.33	24.21
D01002	L	Flush	169-6514	27.69	24.95	24.82
D01003	L	Full Flush	169-6515	27.57	23.64	20.66
Tapered Head						
D01004	S	Semi Flush	169-6516	26.35	23.77	23.62
D01005	S	Flush	169-6517	27.03	24.36	24.22
D01006	S	Full Flush	169-6519	27.64	24.92	24.78
D01007	L	Semi Flush	169-6521	27.00	24.33	24.21
D01008	L	Flush	169-6522	27.69	24.95	24.82
D01009	L	Full Flush	169-6523	27.96	25.22	25.03
Tapered & Relieved Head						
D01010	S	Semi Flush	169-6524	25.16	23.32	23.20
D01011	S	Flush	169-6525	28.07	25.32	25.14
D01012	S	Full Flush	169-6526	28.12	25.37	25.19

Electronic Professional Pliers

The Best Pliers You'll Ever Use

DURATOOL



- High quality ball bearing steel
- 63 - 65 Rockwell Hardness (HRC)
- 2-Component ESD Ergonomic handles, soft comfortable gripping surface, hard plastic core
- Dual leaf springs in blue steel
- Matched bearing rings to minimize metal-metal contact and friction
- Lap joint with screw to achieve a high level of strength and precision
- Static dissipative ($10^6 - 10^8 \Omega/\text{sq.}$), oil, grease and wear-resistant

686047

Mfrs. List No.	Jaw	Overall length inch	mm	Order Code	1+	5+	10+
Long Snipe Nose							
D01013	Smooth	5.6"	143	169-6527	23.97	21.59	21.45
D01014	Serrated	5.6"	143	169-6528	25.74	23.23	23.04
Snipe Nose							
D01015	Smooth	5.2"	133	169-6529	23.19	20.89	20.76
D01016	Serrated	5.2"	133	169-6530	23.65	21.51	21.36
Flat Nose							
D01017	Smooth	5.2"	133	169-6532	23.19	20.88	20.74
Round Nose							
D01018	Smooth	5.2"	133	169-6533	25.79	22.34	19.72

Component Pre-Forming Tools

DURATOOL

NEW



- Simple to use hand operated component performing tool for precise 90° bending of leads from circuit board components such as resistors, diodes, etc.
- Pitch is easily adjusted via a thumbwheel on the tool
- Pointers enable fast and accurate setting of pitch by alignment with PC8 holes
- TP9 accommodates the same range as the TP8 and adds the ability to crop to length at the same time
- TP12 is similar to the TP9 but is designed to work on miniature components

Wire capacity diameter	TP8	TP12	TP9
Maximum Length of Bend	0.25-1mm	0.25-1mm	0.25-1mm
Minimum length of bend	32mm	32mm	16mm
Minimum distance of bend from body of component	9.5mm	9.5mm	6.5mm
Maximum component diameter	1mm	1mm	1mm
Maximum length of cut	13mm	13mm	13mm
Minimum length of cut	—	64mm	32mm
Weight	226g	19mm	16mm
		280g	240g

685410

Description	Mfrs. List No.	Order Code	Price Each
Forming handtool	TP 8	202-2738	52.06
Form/Crop handtool, small	TP 9	202-2739	72.44
Form/Crop handtool, large	TP 12	202-2740	69.05

Crimping Tool and Terminal Kit

DURATOOL

NEW



Crimp assortment consists of crimping pliers, mains tester and various cable terminals.

- 100 pieces of 0.5, 0.75, 1.5 and 2.5mm² and 50 pieces of 4mm²
- 0.25 - 16mm² stripping capacity
- Weight : 700g

685411

Mfrs. List No.	Order Code	1+	5+	10+
D02002	209-4419	22.30	21.15	19.49

VDE Plier Set

4 Piece

DURATOOL

NEW



- Chrome vanadium steel with two colour grip
- Packed in a plastic case with transparent cover
- Contents: 180mm VDE Combination pliers, 160mm VDE Side cutting pliers, 200mm VDE Long nose pliers, 160mm VDE Wire stripping pliers

685594

Mfrs. List No.	Order Code	1+	5+	10+
D01823	206-4414	59.90	57.80	54.90

VDE Combi Kit

4 Piece

DURATOOL

NEW



- Chrome vanadium steel with two colour grip
- Packed in a plastic case with transparent cover
- Contents: 180mm VDE Combination pliers, 160mm VDE Side cutting pliers, 100mm x 4mm VDE slotted screwdriver, 100mm x Size 2 VDE phillips screwdriver

685595

Mfrs. List No.	Order Code	1+	5+	10+
D01824	206-4415	31.71	30.76	29.87

VDE Tool Set

9 Piece



- Chrome vanadium steel with two colour grip
- Packed in a plastic case with transparent cover
- Contents: 180mm VDE Combination pliers, 160mm VDE Side cutting pliers, 200mm VDE Long nose pliers, 2.5mm VDE slotted screwdriver, 4mm VDE slotted screwdriver, 5.5mm VDE slotted screwdriver, Size 1 VDE Phillips screwdriver, Size 2 VDE Phillips screwdriver, Neon screwdriver

NEW

685596

Mfrs. List No.	Order Code	1+	5+	10+
D01825	206-4416	67.40	65.35	63.35

VDE Safety Belt Kit

9 Piece



- Chrome vanadium steel with two colour grip
- Packed in a light weight pouch with buckle
- Contents: 180mm VDE combination pliers, 160mm VDE side cutting pliers, 3.0mm VDE slotted screwdriver, 4mm VDE slotted screwdriver, Size 1 VDE Phillips screwdriver, Size 2 VDE Phillips screwdriver, 140mm VDE electrician shears, 200mm VDE cable stripping knife, Neon screwdriver

NEW

685597

Mfrs. List No.	Order Code	1+	5+	10+
D01826	206-4417	63.34	61.45	59.67

VDE Safety Kit Set

11 Piece



- Chrome vanadium steel with two colour grip
- Packed in a zip up light weight carry case
- Contents: 180mm VDE combination pliers, 160mm VDE side cutting pliers, 200mm VDE long nose pliers, 2.5mm VDE slotted screwdriver, 4.0mm VDE slotted screwdriver, 5.5mm VDE slotted screwdriver, Size 1 VDE Phillips screwdriver, Size 2 VDE Phillips screwdriver, 140mm VDE electrician shears, 200mm VDE cable stripping knife, Neon screwdriver

NEW

685598

Mfrs. List No.	Order Code	1+	5+	10+
D01828	206-4421	106.17	101.98	94.53

217 Piece Rotary Tool Set

UK Plug



Variable speed rotary tool supplied with 217 various accessories. Ideal for electronics, hobbyists and crafts in an attractive carry and storage case with strong perspex window.

Voltage 230V
Input Power 130W
No Load Speed 8000 - 20000 rpm
Chuck Capacity 1, 2.35, 3, 3.2mm

NEW

685412

Mfrs. List No.	Order Code	1+
D02157	210-3255	25.35

208 Piece Rotary Access Set



Multi-tool for cutting, grinding, sanding, sharpening, polishing etc. Works on metal, wood, ceramic, glass and plastic. Will work with most rotary tools.

- 20 x Sanding bands
- 1 x Cloth wheel
- 5 x Felt wheel
- 1 x Rubber emery wheel
- 1 x Felt wheel point
- 3 x Polished hss twist drills 3.2, 2.4, 1.6mm
- 2 x Sanding shank

NEW

- 4 x Diamond cutter
- 3 x HSS cutter
- 6 x Aluminum oxide grinding wheel with shank
- 6 x Aluminum oxide grinding wheel
- 4 x Silicon carbide grinding wheel with shank
- 6 x Silicon carbide grinding wheel
- 3 x Nylon brush
- 3 x Stainless steel brush
- 3 x Brass brush
- 1 x Polishing compound
- 76 x Cut off wheels
- 44 x Sanding disc
- 4 x Chrome plated collect: 3.2, 2, 2.4, 1.6mm
- 4 x Mandrel
- 5 x Fibre glass cut off wheels
- 1 x Dressing stone Si carbide 25.4 x 9.5mm
- 1 x 9.5mm Wrench
- 1 x Flap wheel 32 x 9.5mm

685413

Mfrs. List No.	Order Code	Price Each
D02158	210-3256	11.13

12V Li-Ion Drill/Driver



- Aluminum gear box housing
- Variable speed
- 10mm keyless chuck
- LED light
- Supplied with 12V 1.3Ah Li-Ion battery and charger

NEW

Technical Data	1.3Ah Li-Ion	Technical Data	28N-m
Battery Capacity	12V	Max. Torque	
Voltage	10mm	Drilling Capacity ∅ :	
Chuck	0-350 / 0-1200 rpm	Wood	10mm
No Load Speed		Steel	8mm

685414

Mfrs.		Price Each
List No.	Order Code	1 +
D01961	210-3239	39.62
D01964	Spare Battery 210-3243	16.21

18V Li-Ion Drill/Driver



- 16 Torque settings
- 2 Speed
- Keyless chuck
- Variable speed
- LED Light
- Forward/reverse switch
- Supplied with 18V 1.3Ah Li-Ion battery, charger, blow moulded case

NEW

Technical Data	1.3Ah Li-Ion	Technical Data	20 N-m
Battery Capacity	18V	Max. Torque	
Voltage	10mm	Drilling Capacity ∅ :	
Chuck	0-400 / 001200 rpm	Wood	16mm
No Load Speed		Steel	6mm

685415

Mfrs.			Price Each
List No.		Order Code	1 +
D01965		210-3244	49.78
D01967	Spare Battery	210-3246	30.43

18V Li-Ion Combi Drill

With 2 Batteries



A hammer drill and drill driver for drilling into masonry, concrete as well as wood, plastic and metals.

- 16 Torque settings
- 2 Speed
- 13mm Keyless chuck
- LED Light
- Forward, reverse and brake
- Soft touch, non-slip coating

NEW

- Supplied with 2 x 1.3Ah Li-Ion batteries, charger and blow moulded carry case

Technical Data	Li-Ion	Technical Data	20 N-m
Battery Capacity	18V	Max. Torque	
Voltage	13mm Keyless	Drilling Capacity ∅ :	
Chuck	0-400 / 0-1200 rpm	Wood	10mm
No Load Speed		Steel	8mm

685416

Mfrs.			Price Each
List No.		Order Code	1 +
D01966		210-3245	71.02
D01967	Spare Battery	210-3246	30.43

220W Multi Cutter



D01960 220W multi cutter is a versatile sawing, cutting and sanding with one tool. Supplied with toolholder with universal changing of all accessories with an Allen key.

NEW

- Variable speed control
- Accessories can be attached at different angles
- Softgrip compact housing

- Additional accessory kit includes segment saw blade, E-cut Saw blade, spade, hex key, 1pc sandpaper fixing plate, sandpaper for metal and wood, blow moulded case

Technical Data	Technical Data
Operating Voltage	230V
Power Input	220W
Oscillation Angle	2.8°

685417

Mfrs.	List No.	Order Code	Price Each
			1+
	D01959	210-3237	30.38
	D01960	Accessory Kit 210-3238	10.11

Wall Organiser Cabinet

41 Compartments



- 40 clear compartment pull out trays
- 1 large transparent tray
- Robust impact resistant plastic
- Suitable for wall or desk mounting
- Dimensions: (LxWxH) 310 x 138 x 490mm

DURATOOL

Order Code	1+	5+	10+	20+
144-7384	13.32	12.13	11.14	10.78

685418

Compartment Boxes

DURATOOL



- Transparent
- Hinged lids

Price Each

Sections	Dimensions	Order Code	1+	5+	10+	20+	50+
18	230x125x35mm	144-7377	2.08	1.68	1.53	1.37	1.00
18	292x186x42mm	144-7378	2.44	2.03	1.67	1.50	1.20
24	382x235x48mm	144-7379	3.21	3.01	2.88	2.65	2.44

685419

Assorter Cases

With or Without Removable Inserts

DURATOOL



NEW

Range of either economy cases with 18 compartments with semi-transparent lids or assortment cases with removable inserts.

- Secured by hinges
- Ideal for storing small components and fasteners
- Assortment cases complete with sliding lock to secure the lid
- Set of 4 assorter case suitable for wall or bench mounting
- NB: Tools and accessories not included

Mfrs.	Box Assortment / Tray Colour	Dimensions (H x W x D)	Number of Compartments	Number of Trays	Order Code
D01926	Orange	50 x 320 x 260mm	18	n/a	210-3206
D01927	Orange	60 x 380 x 310mm	18	n/a	210-3207
D01928	Orange	80 x 480 x 380mm	18	n/a	210-3208

D01929	Yellow	30 x 175 x 140mm	n/a	2	210-3209
D01930	Yellow	55 x 240 x 195mm	n/a	8	210-3210
D01931	Yellow	60 x 340 x 250mm	n/a	13	210-3211
D01932	Yellow	55 x 415 x 330mm	n/a	17	210-3212
D01933	Black	310 x 375 x 265mm	n/a	4	210-3213

685420

Mfrs.	List No.	Order Code	1+	5+
		Economy Boxes		
	D01926	210-3206	3.06	2.96
	D01927	210-3207	4.93	4.77
	D01928	210-3208	8.19	7.93
		With Removable Inserts		
	D01929	210-3209	1.19	1.14
	D01930	210-3210	2.28	2.23
	D01931	210-3211	4.98	4.82
	D01932	210-3212	8.24	7.98
		Set of 4 Assorter Case		
	D01933	210-3213	25.86	25.08

General Purpose Tool Cases

18", 21" and Set

DURATOOL



General purpose, steel tool boxes available in 18", 21" and as a set of 3.

NEW

Mfrs.	List No.	Order Code	1+	5+
	D01923	18"	210-3202	15.44 14.98
	D01924	21"	210-3203	20.63 20.01
	D01925	Set of 3	210-3204	50.78 49.28

685421

Waterproof Case

DURATOOL



Waterproof case ideal for instruments, audio visual, photographic and test equipment. (Tools and equipment not included)

- Provides maximum shock protection to contents
- Waterproof
- Can be padlocked for additional security
- Built in pressure valve
- Corrosion proof
- Dimensions: (LxWxH) 270 x 250 x 125mm

NEW

Mfrs.	List No.	Order Code	1+	5+
	D01921	210-3201	19.69	19.12

685422

Wheeled Case

With Foam Insert

DURATOOL



ABS black wheeled case with foam insert for safe storage. Dimensions 230x350x560mm. (Note: tools are not included)

NEW

Mfrs.	List No.	Order Code	1+	5+
	D01920	210-3200	49.00	47.55

685599

INTELLIGENT ONLINE BUYING SYSTEM PROVIDING

Complete cost control, reduced administration time, visibility of your spend, flexibility and personalised to your company's needs.

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Pro-Power offers thousands of great value products, including Cable & Wire, Cable Accessories, Marking & Labelling and Chemical ranges.

For more information please visit uk.farnell.com/pro-power

Tri-Rated Control & Switchgear Wire



Applications include wiring of switch, control, metering, relay and instrument panels of power switchgear and for such purposes as internal connections in rectifier equipment and in motor starters and controllers.

- PVC insulated plain annealed copper conductors
- Manufactured to UL1015
- Maximum operating temperature; 105°C
- Supplied in 100m reels

Current	CSA	Nominal	Current	CSA	Nominal
11.5A	0.5mm ²	3mm	43A	4mm ²	4.8mm
14A	0.75mm ²	3.1mm	56A	6mm ²	5.3mm
19A	1mm ²	3.3mm	79A	10mm ²	7.8mm
24A	1.5mm ²	3.6mm	105A	16mm ²	9mm
32A	2.5mm ²	4.1mm			

685493

		Price Per Reel			
Colour	Order Code	1+	5+	10+	25+
11.5A (0.5mm²)					
Black	117-8264	10.36	10.05	9.89	--
Blue	117-8265	10.36	10.05	9.89	--
Brown	117-8266	10.36	10.05	9.89	--
Grey	117-8268	10.36	10.05	9.89	--
Orange	117-8269	10.36	10.05	9.89	--
Red	117-8270	10.36	10.05	9.89	--
White	117-8272	10.36	10.05	9.89	--
Yellow	117-8273	10.36	10.05	9.89	--
Green, Yellow	117-8274	10.36	10.05	9.89	--
16A (0.75mm²)					
Black	117-8275	12.48	12.29	12.10	--
Blue	117-8276	12.48	12.29	12.10	--
Brown	117-8278	12.48	12.29	12.10	--
Grey	117-8279	12.48	12.29	12.10	--
Orange	117-8280	12.36	12.18	11.97	--
Red	117-8281	12.48	12.29	12.10	--
Purple	117-8282	12.48	12.29	12.10	--
White	117-8284	12.48	12.29	12.10	--
Yellow	117-8285	12.48	12.29	12.10	--
Green, Yellow	117-8286	12.48	12.29	12.10	--
19A (1.0mm²)					
Black	117-8287	16.88	16.52	16.20	16.10
Blue	117-8288	16.88	16.52	16.20	16.10
Brown	117-8289	16.88	16.52	16.20	16.10
Grey	117-8290	16.88	16.52	16.20	16.10
Orange	117-8292	16.88	16.52	16.20	16.10
Red	117-8293	16.88	16.52	16.20	16.10
Purple	117-8294	16.88	16.52	16.20	16.10
White	117-8297	16.88	16.52	16.20	16.10
Yellow	117-8298	16.88	16.52	16.20	16.10
Green, Yellow	117-8299	16.88	16.52	16.20	16.10
24A (1.5mm²)					
Black	117-8300	24.58	23.82	23.12	22.77
Blue	117-8302	24.58	23.82	23.12	22.77
Brown	117-8303	24.58	23.82	23.12	22.77
Grey	117-8304	24.58	23.82	23.12	22.42
Orange	117-8305	24.58	23.82	23.12	22.77
Red	117-8306	24.58	23.82	23.12	22.77
White	117-8307	24.58	23.82	23.12	22.77
Yellow	117-8308	24.58	23.82	23.12	22.77
Green, Yellow	117-8309	24.58	23.82	23.12	22.77
32A (2.5mm²)					
Black	117-8310	36.39	35.30	34.24	33.69
Blue	117-8311	36.39	35.30	34.24	33.69
Brown	117-8312	36.39	35.30	34.24	33.69
Grey	121-9363	49.98	48.64	47.33	46.83
Orange	121-9362	42.75	41.47	40.24	39.60
Red	117-8314	36.39	35.30	34.24	33.19
White	117-8317	36.39	35.30	34.24	33.69
Yellow	117-8315	36.39	35.30	34.24	33.69
Green, Yellow	117-8316	36.39	35.30	34.24	33.69

		Price Per Reel			
Colour	Order Code	1+	5+	10+	25+
43A (4.0mm²)					
Black	117-8318	63.59	61.68	59.80	58.90
Blue	117-8319	63.59	61.68	59.80	58.90
Brown	117-8320	63.59	61.68	59.80	58.90
Grey	177-3459	54.68	53.04	52.22	--
Red	117-8321	63.59	61.68	59.80	58.90
Yellow	117-8322	63.59	61.68	59.80	58.02
Green, Yellow	117-8323	48.08	47.04	45.52	44.09
56A (6.0mm²)					
Black	117-8324	88.97	86.31	84.97	--
Blue	117-8326	88.97	86.31	84.97	--
Brown	117-8327	88.97	86.31	84.97	--
Grey	177-3461	71.49	69.34	68.27	--
Red	117-8328	88.97	86.31	84.97	--
Yellow	117-8329	88.97	86.31	84.97	--
Green, Yellow	117-8330	88.97	86.31	84.97	--
79A (10mm²)					
Black	117-8331	200.03	194.06	188.21	185.32
Blue	117-8334	202.24	196.18	190.29	184.60
Brown	177-3464	140.40	138.38	136.35	--
Grey	177-3462	152.55	147.99	145.71	--
Red	117-8332	202.24	196.18	190.29	187.37
Green, Yellow	117-8333	200.03	194.06	188.21	182.58
105A (16mm²)					
Black	117-8336	292.30	277.67	267.78	--
Brown	177-3465	165.76	149.72	136.51	--
Grey	177-3463	207.63	202.82	198.00	--
Red	117-8339	286.57	272.23	262.52	--
Green, Yellow	117-8341	292.30	277.67	267.78	--

2491X Single Core Flexible



Stranded, PVC insulated copper wires ideal for use within appliances, light fittings and control panels etc. Where the combination of ambient temperature and temperature rise, due to load, results in a temperature not exceeding 70°C.

- Supplied in 100m reels

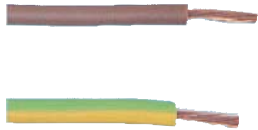
Current Rating	Conductor Size	CSA	Nominal Wall Thickness	Nominal Outside Dia
300/500 Volts				
3A	16 / 0.2mm	0.5mm ²	0.6mm	2.5mm
6A	24 / 0.2mm	0.75mm ²	0.6mm	2.7mm
10A	32 / 0.2mm	1mm ²	0.6mm	2.8mm
450/750 Volts				
16A	30 / 0.25mm	1.5mm ²	0.7mm	3.4mm
25A	50 / 0.25mm	2.5mm ²	0.8mm	4.1mm

685494

		Price Per Reel	
Colour	Order Code	1+	5+
3A (0.5mm²)			
Black	117-7738	9.10	8.82
Blue	117-7739	9.10	8.82
Brown	117-7740	9.10	8.82
Red	117-7741	9.10	8.82
White	117-7742	9.10	8.82
Yellow	117-7743	9.02	8.77
Green, Yellow	117-7744	9.02	8.77
6A (0.75mm²)			
Black	117-7745	11.76	11.41
Blue	117-7747	11.76	11.41
Brown	117-7748	11.76	11.41
Red	117-7749	11.76	11.41
White	117-7750	11.76	11.41
Yellow	117-7751	11.76	11.41
Green, Yellow	117-7752	11.76	11.41

		Price Per Reel	
Colour	Order Code	1+	5+
10A (1.0mm ²)			
Black	117-7753	15.62	15.16
Blue	117-7754	15.62	15.16
Brown	117-7755	15.62	15.16
Red	117-7756	15.62	15.16
White	117-7757	15.62	15.16
Yellow	117-7759	15.62	15.16
Green, Yellow	117-7761	15.62	15.16
16A (1.5mm ²)			
Black	117-7762	18.67	18.10
Blue	117-7763	18.67	18.10
Brown	117-7764	18.67	18.10
Red	117-7765	18.67	18.10
White	117-7766	18.67	18.10
Yellow	117-7767	18.45	17.88
Green, Yellow	117-7768	18.67	18.10
25A (2.5mm ²)			
Black	117-7769	35.23	34.17
Blue	117-7770	35.23	34.17
Brown	117-7772	35.23	34.17
Red	117-7773	35.23	34.17
White	117-7774	34.77	33.72
Green, Yellow	117-7776	35.23	34.17

2491B Single Core Flexible



Flexible single core cable with low smoke zero halogen insulation, for internal wiring of appliances with maximum operating temperatures of 90°C.

- Conductors: Annealed copper insulation
- Type EI.5 Low smoke zero halogen, thermosetting insulation
- Temp Rating: 90°C Max conductor operating temperature

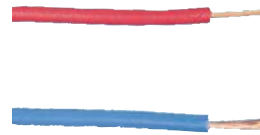
- Voltage Rating: 2491B 300/500V (0.5 to 1.0mm)
- Voltage Rating: 2491B 450/750V (1.5 to 6.0mm)

CSA	Conductor Size	Nominal Outside Dia
0.5mm ²	16 x 0.2mm	2.12mm
0.75mm ²	24 x 0.2mm	2.33mm
1mm ²	32 x 0.2mm	2.48mm
1.5mm ²	30 x 0.25mm	2.98mm
2.5mm ²	50 x 0.25mm	3.63mm
6mm ²	84 x 0.3mm	5mm

685495

100m Reels		Price Per Reel	
Colour	Order Code	1+	3+
0.5mm²			
Black	146-5920	15.94	15.44
Green, Yellow	146-5921	15.63	15.14
0.75mm²			
Brown	146-5923	20.16	19.56
Blue	146-5924	20.16	19.56
Black	146-5925	20.16	19.56
Green, Yellow	146-5926	20.16	19.56
1.0mm²			
Brown	146-5927	24.89	24.15
Blue	146-5928	24.89	24.15
Black	146-5929	24.89	24.15
Green, Yellow	146-5930	24.89	24.15
1.5mm²			
Brown	146-5931	32.82	31.82
Blue	146-5932	32.82	31.82
Black	146-5933	32.18	31.20
Green, Yellow	146-5935	32.82	31.82
2.5mm²			
Brown	146-5936	42.06	40.79
Blue	146-5937	42.08	40.81
Black	146-5938	46.30	35.41
Green, Yellow	146-5939	58.28	56.53
6.0mm²			
Blue	146-5941	117.48	113.93
Black	146-5942	120.36	117.17
Green, Yellow	146-5943	158.17	153.44

Switchgear Wire (BK & CK) to BS6231



Flexible switchgear and control wire, applications include the wiring of switch or control panels and in motor starters and controllers.

- PVC insulated plain annealed copper conductors to BS6231

- Maximum temperature ambient plus load; BK 70°C, CK 80°C (CK types however can be

used up to 105°C where there is no flexing or mechanical stress)

- Minimum temperature once installed; BK -20°C, CK -15°C
- Voltage rating; 600/1000V

Current Rating	Conductor Size	CSA	Nominal Wall Thickness	Nominal Outside Dia
19A	32 / 0.2mm	1mm ²	0.8mm	3.3mm
24A	30 / 0.25mm	1.5mm ²	0.8mm	3.6mm
32A	50 / 0.25mm	2.5mm ²	0.8mm	4.1mm
43A	56 / 0.3mm	4mm ²	0.8mm	4.8mm
56A	84 / 0.3mm	6mm ²	0.8mm	5.3mm
79A	80 / 0.4mm	10mm ²	0.8mm	7.2mm
105A	126 / 0.4mm	16mm ²	0.8mm	9mm
141A	196 / 0.4mm	25mm ²	0.8mm	11.5mm
167A	276 / 0.4mm	35mm ²	0.8mm	11.3mm

685496

100m Reels		Price Per Reel	
Colour	Order Code	1+	5+

19A Type BK			
Black	117-9155	24.17	23.34
Red	117-9156	24.17	23.34

24A Type CK			
Black	117-9157	20.01	18.97
Blue	117-9158	20.01	18.97
Red	117-9161	35.42	32.33
Green, Yellow	117-9162	35.42	32.33

32A Type CK			
Black	117-9163	30.03	29.13
Blue	117-9164	48.13	44.06
Red	117-9165	52.76	47.71
Green, Yellow	117-9167	32.98	31.99

24A Type BK			
Black	117-9168	34.35	32.81
Green	117-9169	34.35	32.81
Red	117-9170	34.35	32.81
Green, Yellow	117-9171	20.21	19.66

32A Type BK			
Black	117-9173	50.41	45.45
Blue	117-9174	37.30	35.36
Red	117-9175	50.41	45.45
Green, Yellow	117-9176	50.41	45.45

43A Type BK			
Black	117-9177	69.89	63.33
Red	117-9178	72.09	65.31
Green, Yellow	117-9179	72.09	65.31

56A Type BK			
Black	117-9180	99.84	95.66
Blue	117-9181	96.34	92.30
Red	117-9182	99.84	95.66
Green, Yellow	117-9183	99.84	95.66

79A Type BK			
Black	117-9185	154.70	146.96
Red	117-9186	112.44	106.82
Green, Yellow	117-9187	146.89	139.71

50m Reels		Price Per Reel	
Colour	Order Code	1+	5+
105A Type BK			
Black	117-9188	119.20	113.29
Red	117-9189	124.58	118.36
Green, Yellow	117-9190	109.93	104.44

141A Type BK			
Black	117-9191	207.23	196.86
Red	117-9192	198.99	189.03

167A Type BK			
Black	117-9194	261.76	253.70

25m Reels		Price Per Reel	
Colour	Order Code	1+	5+
56A Type BK			
Black	117-9195	29.62	28.13
Blue	117-9197	29.02	27.65
Red	117-9198	23.53	22.65
Yellow	117-9199	18.99	18.28
Green, Yellow	117-9200	18.98	18.28

25m Reels		Price Per Reel	
Colour	Order Code	1+	5+
79A Type BK			
Black	117-9201●	47.25	44.92
Red	117-9204●	47.25	44.92
105A Type BK			
Black	117-9207●	63.18	60.02
Red	117-9209●	63.18	60.02
141A Type BK			
Black	117-9212●	93.54	88.87

Equipment Wire



PVC insulated equipment wires intended for the internal wiring of electrical and electronic equipment.

- PVC insulated tinned copper conductors to DEF61-12 (Part 6) Type 2 (1000V) or Type 3 (1500V) and BS4808 Part 2.
- Various colours available

	Type 2	Type 2	Type 2	Type 3	Type 2	Type 3	Type 3	Type 3
Nom. outside dia.	1.05	1.2	1.6	2.13	2.05	2.34	2.52	3
Wall thickness	0.3mm	0.3mm	0.3mm	0.6mm	0.45mm	0.6mm	0.6mm	0.6mm
Voltage rating	1kV	1kV	1kV	1.5kV	1kV	1kV	1.5kV	1.5kV
Current rating @ 70°C	500mA	1.4A	3A	3A	4.5A	4.5A	6A	11A

10/0.1mm Type 2 (0.078mm²)

Conductor 10/0.1mm		Price Per Reel				
Colour	Order Code	1+	5+	10+	25+	50+
100m Reels						
Black	117-2853●	7.08	6.87	6.65	6.53	--
Brown	117-2854●	7.02	6.83	6.58	6.50	--
Red	117-2855●	7.02	6.83	6.58	6.40	5.31
Orange	117-2856●	7.02	6.83	6.58	6.40	5.31
Yellow	117-2857●	7.02	6.83	6.58	6.40	5.31
Green	117-2858●	10.23	9.95	9.59	9.33	7.74
Blue	117-2859●	7.02	6.83	6.58	6.40	5.31
Pink	117-2860●	7.02	6.83	6.58	6.40	5.31
Grey	117-2861●	7.02	6.83	6.58	6.40	5.31
White	117-2862●	7.02	6.83	6.58	6.40	5.31
Purple	117-2863●	7.02	6.83	6.58	6.40	5.31
500m Reels						
Red	117-2865●	35.86	33.09	30.71	28.68	23.24
Yellow	117-2866●	35.93	33.15	30.78	28.74	23.28
Green	117-2867●	35.23	32.50	30.18	28.17	22.82
Blue	117-2868●	35.86	33.12	30.71	28.68	22.78

7/0.2mm Type 2 (0.22mm²) Plain Colours

Conductor 7/0.2mm		Price Per Reel				
Colour	Order Code	1+	5+	10+	25+	50+
100m Reels						
Black	121-9323●	6.25	5.94	--	--	--
Brown	121-9324●	9.00	8.71	--	--	--
Red	121-9325●	6.25	5.97	--	--	--
Orange	121-9326●	9.89	9.57	--	--	--
Yellow	121-9328●	6.26	5.91	--	--	--
Green	121-9329●	10.25	9.95	--	--	--
Blue	121-9330●	9.39	9.10	--	--	--
Purple	121-9331●	9.39	9.10	--	--	--
Grey	121-9332●	7.67	7.41	--	--	--
White	121-9333●	8.64	8.36	--	--	--
Pink	121-9334●	10.62	10.25	--	--	--
500m Reels						
Black	117-2870●	24.57	23.83	23.11	22.41	22.17
Brown	117-2871●	24.57	23.83	23.11	22.41	22.17
Red	117-2872●	24.57	23.83	23.11	22.41	22.17
Orange	117-2873●	24.57	23.83	23.11	22.41	22.17
Yellow	117-2874●	24.57	23.83	23.11	22.41	22.17
Green	117-2875●	24.57	23.83	23.11	22.41	22.17
Blue	117-2877●	24.57	23.83	23.11	22.41	22.17
Purple	117-2878●	24.57	23.83	23.11	22.41	22.17
Grey	117-2879●	24.57	23.83	23.11	22.41	22.17
White	117-2880●	24.57	23.83	23.11	22.41	22.17
Pink	117-2881●	24.57	23.83	23.11	22.41	22.17
Kit containing 1 of each colour (11x 100m Reels)						
Multiple	117-2882●	88.77	87.07	86.45	85.95	84.31

7/0.2mm Type 2 (0.22mm²) Bi-Colours

Conductor 7/0.2mm		Price Per Reel				
Colour	Order Code	1+	5+	10+	25+	50+
100m Reels						
Black, Red	117-2883●	7.86	7.31	6.71	6.35	6.34
Brown, Red	117-2884●	7.86	7.31	6.71	6.35	6.34
Green, Red	117-2885●	7.86	7.31	6.71	6.35	6.34
Blue, Red	117-2886●	7.86	7.31	6.71	6.35	6.34
Black, Orange	117-2887●	7.86	7.31	6.71	6.35	6.34
Orange, Red	117-2889●	7.86	7.31	6.71	6.35	6.34
Black, Yellow	117-2891●	7.86	7.31	6.71	6.35	6.34
Red, Yellow	117-2892●	7.86	7.31	6.71	6.35	6.34
Green, Yellow	117-2893●	7.80	7.25	6.67	6.31	6.30
Green, Red	117-2894●	7.80	7.25	6.67	6.31	6.30
Purple, Red	117-2895●	7.74	7.19	6.60	6.25	6.24
Black, Grey	117-2896●	7.86	7.31	6.71	6.35	6.34
Blue, Grey	117-2897●	7.86	7.31	6.71	6.35	6.34
Black, White	117-2898●	7.80	7.25	6.67	6.31	6.30
Red, White	117-2899●	7.80	7.25	6.67	6.31	6.30
Black, Pink	117-2900●	7.86	7.31	6.71	6.35	6.34
Green, Yellow	117-2901●	7.86	7.31	6.71	6.35	6.34
Purple, Red	117-2902●	6.34	5.89	5.42	5.12	5.02

16/0.2mm Type 2 (0.5mm²) Plain Colours

Conductor 16/0.2mm		Price Per Reel				
Colour	Order Code	1+	5+	10+	25+	50+
100m Reels						
Black	117-2904●	9.97	9.87	9.67	9.47	9.29
Brown	117-2905●	11.49	11.15	10.79	10.47	10.36
Red	117-2907●	9.97	9.87	9.67	9.47	9.29
Orange	117-2908●	11.49	11.15	10.79	10.47	10.36
Yellow	117-2909●	11.49	11.15	10.79	10.47	10.36
Green	117-2910●	11.49	11.15	10.79	10.47	10.36
Blue	117-2911●	11.49	11.15	10.79	10.47	10.36
Purple	117-2912●	11.49	11.15	10.79	10.47	10.36
Grey	117-2913●	11.49	11.15	10.79	10.47	10.36
White	117-2914●	11.49	11.15	10.79	10.47	10.36
Pink	117-2915●	11.49	11.15	10.79	10.47	10.36
500m Reels						
Black	117-2916●	52.49	50.89	49.38	47.88	47.42
Brown	117-2917●	53.27	51.66	50.13	48.61	48.12
Red	117-2919●	53.27	51.66	50.13	48.61	48.12
Orange	117-2921●	53.27	51.66	50.13	48.61	48.12
Yellow	117-2922●	53.27	51.66	50.13	48.61	48.12
Green	117-2923●	53.27	51.66	50.13	48.61	48.12
Blue	117-2924●	53.27	51.66	50.13	48.61	48.12
Purple	117-2925●	53.27	51.66	50.13	48.61	48.12
Grey	117-2926●	53.27	51.66	50.13	48.61	48.12
White	117-2927●	53.27	51.66	50.13	48.61	48.12
Pink	117-2928●	53.27	51.66	50.13	48.61	48.12
Kit containing 1 of each colour (11x 100m Reels)						
Black to Pink	117-2929●	88.84	86.16	83.58	81.08	78.64

16/0.2mm Type 2 (0.5mm²) Bi-Colours

Conductor 16/0.2mm		Price Per Reel				
Colour	Order Code	1+	5+	10+	25+	50+
100m Reels						
Black, Red	117-2930●	15.30	14.83	14.39	13.96	13.81
Brown, Red	117-2932●	15.30	14.83	14.39	13.96	13.81
Green, Red	117-2933●	15.30	14.83	14.39	13.96	13.81
Blue, Red	117-2934●	15.30	14.83	14.39	13.96	13.81
Black, Orange	117-2935●	15.30	14.83	14.39	13.96	13.81
Orange, Red	117-2936●	15.30	14.83	14.39	13.96	13.81
Black, Yellow	117-2937●	15.30	14.83	14.39	13.96	13.81
Red, Yellow	117-2938●	15.30	14.83	14.39	13.96	13.81
Green, Yellow	117-2939●	15.30	14.83	14.39	13.96	13.81
Green, Red	117-2940●	15.30	14.83	14.39	13.96	13.81
Purple, Red	117-2941●	15.30	14.83	14.39	13.96	13.81
Black, Grey	117-2942●	15.30	14.83	14.39	13.96	13.81
Blue, Grey	117-2944●	15.30	14.83	14.39	13.96	13.81
Black, White	117-2945●	15.30	14.83	14.39	13.96	13.81
Red, White	117-2946●	15.30	14.83	14.39	13.96	13.81

Conductor 16/0.2mm

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black, Pink	117-2947	15.30	14.83	14.39	13.96	13.81
Green, Yellow	117-2948	15.30	14.83	14.39	13.96	13.81
Purple, Red	117-2949	9.95	9.65	9.36	9.08	8.81
500m Reels						
Green, Yellow	117-2950	51.61	49.96	48.52	47.09	46.56

16/0.2mm Type 3 (0.5mm²)

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black	117-2952	19.36	17.87	16.98	15.18	14.08
Brown	117-2953	19.36	17.87	16.98	15.18	14.08
Red	117-2954	19.36	17.87	16.98	15.18	14.08
Orange	117-2956	19.36	17.87	16.98	15.18	14.08
Yellow	117-2957	19.36	17.87	16.98	15.18	14.08
Green	117-2958	19.36	17.87	16.98	15.18	14.08
Blue	117-2959	19.36	17.87	16.98	15.18	14.08
Purple	117-2960	19.36	17.87	16.98	15.18	14.08
Grey	117-2961	19.36	17.87	16.98	15.18	14.08
White	117-2962	19.36	17.87	16.98	15.18	14.08
Pink	117-2963	19.36	17.87	16.98	15.18	14.08
Green, Yellow	117-2964	18.88	17.44	16.55	14.81	13.74

24/0.2mm Type 2 (0.75mm²)

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black	117-2965	16.08	15.61	15.15	14.66	14.52
Brown	117-2966	16.08	15.61	15.15	14.66	14.52
Red	117-2968	16.08	15.61	15.15	14.66	14.52
Orange	117-2969	16.08	15.61	15.15	14.66	14.52
Yellow	117-2970	16.08	15.61	15.15	14.66	14.52
Green	117-2971	16.08	15.61	15.15	14.66	14.52
Blue	117-2972	16.08	15.61	15.15	14.66	14.52
Purple	117-2973	16.08	15.61	15.15	14.66	14.52
Grey	117-2974	16.08	15.61	15.15	14.66	14.52
White	117-2975	16.08	15.61	15.15	14.66	14.52
Pink	117-2976	16.08	15.61	15.15	14.66	14.52
Green, Yellow	117-2977	15.40	14.97	14.52	14.09	13.94
Green, Yellow	117-2978	15.40	14.97	14.52	14.09	13.94
500m Reels						
Black	117-2981	69.92	67.81	65.92	64.09	63.98
Red	117-2982	69.92	67.81	65.92	64.09	63.98
Blue	117-2984	69.92	67.81	65.92	64.09	63.98
Grey	117-2985	69.92	67.81	65.92	64.09	63.98
White	117-2986	69.92	67.81	65.92	64.09	63.98
Pink	117-2989	69.92	67.81	65.92	64.09	62.72

24/0.2mm Type 3 (0.75mm²)

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black	117-2995	17.05	15.84	15.63	15.34	15.14
Brown	117-2996	17.05	15.84	15.63	15.34	15.14
Red	117-2997	17.05	15.84	15.63	15.34	15.14
Orange	117-2998	17.05	15.84	15.63	15.34	15.14
Yellow	117-2999	17.05	15.84	15.32	15.04	14.84
Green	117-3000	17.05	15.84	15.63	15.34	15.14
Blue	117-3001	17.05	15.84	15.63	15.34	15.14
Purple	117-3002	16.71	15.52	15.32	15.04	14.84
Grey	117-3003	16.71	15.52	15.32	15.04	14.84
White	117-3004	16.89	15.70	15.45	15.21	14.99
Pink	117-3006	13.01	12.34	11.69	11.36	10.21
Green, Yellow	117-3007	16.45	15.30	15.07	14.80	14.60
500m Reels						
Black	117-3008	78.38	71.27	63.56	55.87	52.84
Red	117-3009	51.01	47.37	44.20	41.44	39.01
White	117-3011	78.38	71.27	63.56	62.92	56.99

32/0.2mm Type 3 (1.0mm²)

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black	117-3012	19.30	18.73	18.17	17.62	17.44
Brown	117-3013	19.30	18.73	18.17	17.62	17.44
Red	117-3014	19.30	18.73	18.17	17.62	17.44
Orange	117-3015	19.30	18.73	18.17	17.62	17.44
Yellow	117-3016	19.30	18.73	18.17	17.62	17.44
Green	117-3018	19.30	18.73	18.17	17.62	17.44
Blue	117-3019	19.30	18.73	18.17	17.62	17.44
Purple	117-3020	19.30	18.73	18.17	17.62	17.44
Grey	117-3021	19.30	18.73	18.17	17.62	17.44
White	117-3022	19.30	18.73	18.17	17.62	17.09
Pink	117-3023	19.30	18.73	18.17	17.62	17.44
Green, Yellow	117-3024	19.33	18.76	18.20	17.66	17.47
Green, Yellow	117-3025	19.33	18.76	18.20	17.66	17.47
500m Reels						
Black	117-3026	85.71	83.13	80.66	78.23	77.38
Red	117-3027	85.71	83.13	80.66	78.23	77.38
Blue	117-3031	85.71	83.13	80.66	78.23	77.38
Brown	117-3032	82.73	80.43	78.27	75.96	73.87
Pink	117-3034	71.89	70.27	68.73	67.25	65.83
Yellow	117-3036	85.71	83.13	80.66	78.23	75.87
Green, Yellow	117-3038	86.07	83.49	81.01	78.56	77.70

63/0.2mm Type 3 (2.0mm²)

Colour	Order Code	Price Per Reel				
100m Reels		1+	5+	10+	25+	50+
Black	117-3039	39.04	37.06	35.20	33.48	32.45
Red	117-3040	38.63	36.66	34.81	33.09	32.09

RG58BU/CU - 50Ω



- Solid polyethylene insulated 1/0.8mm copper clad steel conductor (RG58BU)
 - Braid screen
 - Black PVC sheathed overall to MIL-C17D
- Nominal outside diameter 5mm Maximum RF working voltage peak
Capacitance 100pF/m Nominal attenuation (100m) 16dB @ 100mHz,
Maximum voltage dc 60dB @ 1000mHz,

		Price Per Reel				
50m Reel	Order Code	1+	5+	10+	15+	20+
RG58BU	120-2663	30.84	29.15	28.53	23.61	23.58
100m Reel						
RG58BU	120-2665	64.00	62.06	60.21	58.40	57.79
500m Reel						
RG58CU	120-2666	257.11	248.04	246.72		
Continuous Length in 1m Multiples						
RG58BU	144-0543	0.90				

RG174AU 50Ω



- Solid polyethylene insulated 7/34 AWG copper covered steel conductors
- Black PVC sheathed overall to MIL-C17
- Braid screened
- Use with SMB, SMC and MCX connectors.

Nominal outside diameter 2.8mm Maximum RF working voltage peak
Capacitance 105pF/m Nominal attenuation (100m) 59dB @ 400mHz,
Max. voltage (core to screen) 6kV dc
(screen to sheath outer) dc

Reel			Price Per Reel				
Colour	Length	Order Code	1+	5+	10+	15+	20+
Black	50m	120-2736	25.39	24.73	24.23	21.73	20.28
Black	100m	120-2737	41.37	40.32	39.46	34.79	33.59
Black	500m	120-2738	247.86	226.51	220.71	--	--
Black	1m	138-7745	0.76	--	--	--	--

Grey 1.27mm (0.05") Pitch



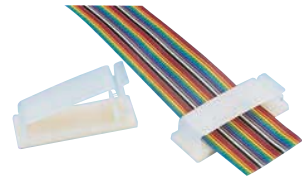
- Manufactured in VW-1 flame retardant Grey PVC sleeving
- The first conductor is identified by a Red leading edge

Wire gauge	AWG stranded	Impedance	100Ω
	7/0.127mm tinned copper	Capacitance	45pF/m
Temperature rating	105°C	Inductance	1.45μH/m
Voltage rating	300V	Insulation resistance	GΩ/m
Propagation delay	4.2ns/m	Conductor resistance	237Ω/km

686053

30.5m Reels Conductors	Order Code	Price Per Reel		
		1+	5+	10+
8	918-7111	18.31	17.76	17.47
9	918-7120	7.18	--	--
10	918-7138	14.72	14.08	13.76
14	918-7146	18.26	17.50	16.19
15	918-7154	14.67	13.91	13.18
16	918-7162	20.66	19.74	18.26
20	918-7170	28.40	25.95	24.00
24	918-7189	31.89	31.41	30.91
25	918-7197	36.93	33.63	31.11
26	918-7200	31.33	29.96	28.60
34	918-7219	31.52	28.49	25.97
36	918-7227	41.92	36.32	32.06
37	918-7235	45.86	44.59	44.05
40	918-7243	35.46	32.02	29.20
50	918-7251	62.54	59.67	56.80
60	918-7260	84.42	81.89	80.61
64	918-7278	87.42	80.40	75.33

Ribbon Cable Clamps - Self-Adhesive



- One-piece releasable ribbon cable clamps in Natural Nylon 66
- Self-adhesive foam pad
- Flame retardant to UL94V-2

Max. Cable Width (mm)	Overall Length (mm)	Overall Width (mm)	Overall Height (mm)	Order Code
32	45.8	19.4	18	126-8996
39.5	53.3	19.4	18	126-8997
63.5	76.2	19.4	18	126-8998

Max. Cable Width	Order Code	10+	50+	100+	500+	1K+
32	126-8996	0.38	0.33	0.26	0.23	0.21
39.5	126-8997	0.47	0.43	0.38	0.32	0.25
63.5	126-8998	0.50	0.48	0.44	0.39	0.32

686054

Cable Ties



- One piece non-releasable cable ties manufactured in Natural or Black Nylon 66
- Flame retardant to UL94V-2

Length (mm)	Width (mm)	Min. Tensile Strength (kg)	Max. Bundle Dia. (mm)	Natural Order Code	Black Order Code
71	1.6	--	11	177-3454	177-3455
100	2.5	--	22	141-6039	141-6050
203	2.5	17.63(lb)	55	141-6040	141-6051
142	3.2	18	34	141-6041	141-6052
203	3.6	18	52	141-6043	141-6053
120	4.8	22	27	141-6044	141-6055
203	4.6	22	52	141-6045	141-6056
250	4.8	22	68	141-6046	141-6057
368	4.8	22	105	141-6047	141-6058
203	7.6	55	52	141-6048	141-6059
380	7.6	55	105	141-6049	141-6060

685500

100 Per Pack		Price Per Pack			
	Order Code	1+	5+	10+	25+
Natural	177-3454	1.19	0.84	0.65	0.53
Natural	141-6039	1.46	1.07	0.87	0.70
Natural	141-6040	2.07	1.71	1.37	1.28
Natural	141-6041	3.11	2.65	2.31	2.03
Natural	141-6043	2.64	2.16	1.69	1.62

100 Per Pack

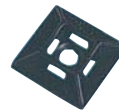
Price Per Pack

	Order Code	1+	5+	10+	25+
Natural	141-6044	2.22	1.86	1.46	1.40
Natural	141-6045	2.81	2.32	1.83	1.72
Natural	141-6046	5.04	4.24	3.33	3.14
Natural	141-6047	6.54	6.00	4.80	4.42
Natural	141-6048	7.30	6.49	5.65	5.28
Natural	141-6049	15.22	14.48	13.38	12.88
Black	177-3455	1.26	0.89	0.69	0.56
Black	141-6050	1.42	1.04	0.84	0.68
Black	141-6051	2.07	1.71	1.37	1.28
Black	141-6052	3.74	2.80	2.32	1.98
Black	141-6053	2.84	2.37	1.86	1.76
Black	141-6055	2.22	1.86	1.46	1.40
Black	141-6056	3.05	2.55	2.02	1.91
Black	141-6057	5.04	4.24	3.33	3.14
Black	141-6058	6.05	5.45	4.37	4.01
Black	141-6059	6.84	5.96	5.17	4.85
Black	141-6060	13.44	12.53	11.57	11.17

Cable Tie Mounting Bases



- Natural or Black ABS plastic mounting bases with self-adhesive or central screw fixing options
- Accepts ties from all four sides



100 Per Pack

Price Per Pack

	Order Code	1+
Natural	268-690	8.91
Natural	268-707	9.30
Black	268-719	8.91
Black	268-720	9.11

Weather Resistant Cable Ties



- High quality, durable Black ties
- Specifically manufactured for use in outdoor environments
- Manufactured from nylon 6/6 with added carbonate A
- Excellent resistance to ultra violet light
- UL recognised (E97527)

685502

100 Per Pack

Price Per Pack

Length (mm)	Width (mm)	Order Code	1+	10+	50+
100	2.5	126-8999	1.49	1.14	0.93
120	4.8	126-9000	3.75	2.92	2.48
142	2.5	126-9001	2.23	1.81	1.53
142	3.2	126-9002	2.78	2.25	1.93
165	2.5	126-9003	2.98	2.34	2.01
160	4.8	126-9004	1.98	1.74	1.65
203	2.5	126-9005	2.47	2.11	1.85
203	3.6	126-9006	2.08	1.87	1.78
203	4.6	126-9007	2.24	2.11	2.03
292	3.6	126-9009	3.00	2.87	2.80
300	4.8	126-9011	3.43	3.21	2.97
370	3.6	126-9012	3.74	3.52	3.28
370	4.8	126-9013	4.33	4.19	3.93
380	7.6	126-9014	9.40	8.96	8.75

Spiral Wrap



- Durable, reusable with retained spiral strength
- Fix ends of band with cable ties and spiral wire bundles in anti-clockwise direction to complete works
- Flexible construction encables bands to follow wire ways easily
- Expand spiral range almost without limit
- Available in Natural or Black

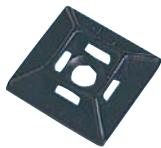
- Supplied in 10m lengths

686057

10m Coil		Bore	Price Per Coil			
Natural	Dia. (mm)	Order Code	1+	5+	10+	
KS6N	3.2	141-6082	2.16	1.79	1.42	
KS10N	7.5	141-6083	3.83	3.17	2.53	
KS15N	12	141-6084	7.09	5.84	4.66	
KS19N	15	141-6085	7.84	6.49	5.19	
KS24N	20	141-6086	10.11	8.35	6.67	
Black						
KSR6BK	3.2	141-6087	2.21	1.82	1.45	
KSR10BK	7.5	141-6088	3.91	3.23	2.58	
KSR15BK	12	141-6089	5.63	4.65	3.72	
KSR19BK	15	141-6090	7.71	6.38	5.08	
KSR24BK	20	141-6092	9.63	7.96	6.34	

Cable Tie Mounting Bases

Natural and Black



- Natural or Black nylon 66 mounting bases, self-adhesive or central screw fixing
- Accepts ties from all four sides
- Flame retardant to **UL94V2**

Base size=28 x 28, Max. cable width=5, Mounting hole=5

685503

100 Per Pack		Price Per Pack			
	Order Code	1+	5+	10+	50+
Natural	121-8024	9.09	8.03	6.86	5.99
Black	121-8026	10.16	8.94	7.61	6.68

Identification Cable Ties



- One piece non-releasable identification ties
- Manufactured in **TO UL94V-2** flame retardant Natural Nylon 66
- Tag can be marked using self-adhesive labels or indelible marker pen

Length	Width	Min. Tensile Strength (kg)	Max. Bundle Dia.	Marker Tag Size	Order Code
100mm	2.5mm	8kg	25mm	8mm x 25mm	141-6064
110mm	2.5mm	8kg	25mm	8mm x 25mm	174-0426
130mm	2.5mm	8kg	25mm	20mm x 28mm	174-0425
200mm	2.5mm	8kg	50mm	15mm x 30mm	174-0429
200mm	4.6mm	22kg	50mm	13mm x 28mm	174-0427
270mm	4.6mm	22kg	75mm	13mm x 28mm	174-0431

FOR SUITABLE MARKER PEN SEE ORDER CODE 117-9865

685504

100 Per Pack			Max.	Price Per Pack			
L	W	Dia.	Order Code	1+	5+	10+	50+
100mm	2.5mm	25mm	141-6064	4.14	3.67	3.25	2.71
110mm	2.5mm	25mm	174-0426	3.48	3.23	3.01	2.83
130mm	2.5mm	25mm	174-0425	4.43	4.14	3.88	3.69
200mm	2.5mm	50mm	174-0429	4.14	3.88	3.60	3.40
200mm	4.6mm	50mm	174-0427	3.64	3.25	2.93	2.67
270mm	4.6mm	75mm	174-0431	3.33	2.89	2.55	2.29

Polyimide ESD Tape



- Primer coated with Dow Corning Silicone adhesive
- Pressure sensitive adhesive and anti corrosion
- Heat resistant up to 280°C @ 5 mins max
- Backing Thickness = 0.025mm
- Total Thickness = 0.065mm
- ESD safe
- Brown colour
- Available in a variety of widths with a standard length of 33m

NEW

Mftrs.		Price Each			
Tape Width	List No.	Order Code	1+	5+	10+
9mm	PPC212	206-1290	11.71	11.12	10.56
12mm	PPC213	206-1291	15.60	14.82	14.09
19mm	PPC214	206-1292	24.70	23.47	22.29
25mm	PPC215	206-1293	32.51	30.87	29.34

685505

Polyimide Brown Tape



- Primer coated with Dow Corning Silicone adhesive
- Pressure sensitive adhesive and anti corrosion
- Heat resistant up to 260°C @ 5 mins max
- Backing Thickness = 0.025mm
- Total Thickness = 0.065mm
- Brown colour
- Available in a variety of widths with a standard length of 33m

NEW

685506

Mftrs.		Price Each			
Tape Width	List No.	Order Code	1+	5+	10+
6mm	PPC216	206-1294	2.33	2.22	2.11
9mm	PPC217	206-1295	3.49	3.31	3.15
12mm	PPC218	206-1297	4.67	4.43	4.20
19mm	PPC219	206-1298	7.39	7.03	6.66
25mm	PPC220	206-1299	9.26	8.79	8.35

Polyimide Brown Tape



- Primer coated with Dow Corning Silicone adhesive
- Pressure sensitive adhesive and anti corrosion
- Heat resistant up to 280°C @ 5 mins max
- Backing Thickness = 0.025mm
- Total Thickness = 0.055mm
- Brown colour
- Available in a variety of widths with a standard length of 33m

NEW

685507

Mftrs.		Price Each			
Tape Width	List No.	Order Code	1+	5+	10+
6mm	PPC221	206-1300	2.13	2.03	1.92
9mm	PPC222	206-1301	3.19	3.05	2.87
12mm	PPC223	206-1303	4.24	4.02	3.83
19mm	PPC224	206-1304	6.72	6.40	6.07
25mm	PPC225	206-1305	8.84	8.40	7.99

Polyimide Double Sided Adhesive Tape



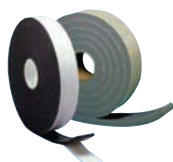
- Primer coated with Dow Corning Silicone adhesive
- Pressure sensitive adhesive and anti corrosion
- Heat resistant up to 280°C @ 5 mins max
- Workside Adhesive 5.8-7.6/N : Adhesive Side 6.5-8.3/N
- Backing Thickness = 0.025mm
- Total Thickness = 0.150mm
- Brown colour
- Available in a variety of widths with a standard length of 33m

NEW

685508

Mftrs.		Price Each			
Tape Width	List No.	Order Code	1+	5+	10+
6mm	PPC226	206-1306	9.16	8.71	8.25
9mm	PPC227	206-1307	13.73	13.04	12.40
12mm	PPC228	206-1308	18.32	17.40	16.53
19mm	PPC229	206-1309	29.00	27.55	26.18
25mm	PPC230	206-1310	38.15	36.25	34.43

Tape, Foam Sealer, Black



Medium density PVC foam air, dust and weatherseal, coated on the face side with an acrylic pressure sensitive adhesive for easy positioning. A removable support liner on the other side prevents stretch during application. For general sealing and cushioning applications, can be cleanly drilled through for mechanical fixing.

<ul style="list-style-type: none">● Cushioning● Sound insulation● Water seals● Air seals		<ul style="list-style-type: none">● Dust seals● Light seals● Abrasive protection● Electrolytic insulation		<ul style="list-style-type: none">● Draught seals● Anti-vibration insulation● Security bonding		685509
Tape	Tape	Mftrs.	Price Per Reel			
Length	Width	List No.	Order Code	1+	5+	10+
25m	6mm	PPC116	176-0686	3.59	3.23	2.91
4.5m	12mm	PPC117	176-0687	4.66	4.19	3.76
15m	19mm	PPC118	176-0688	7.46	6.71	6.04
12m	19mm	PPC119	176-0689	7.35	6.61	5.95

685509

Battery Retainer Clips

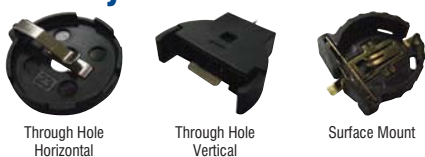


Contact Material Phosphor Bronze
Contact Plating Nickel

685510

Battery Sizes Accepted	Order Code	Price Each			
		10+	25+	100+	250+
2450	206-4669	0.250	0.220	0.200	0.168
2032	206-4713	0.168	0.156	0.133	0.112

Battery Holders



Through Hole Horizontal

Through Hole Vertical

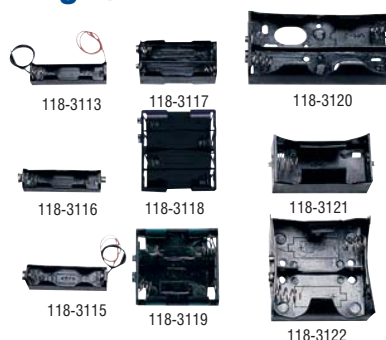
Surface Mount

NOTE: Please see individual datasheets for dimensional detail.

685511

Battery Sizes Accepted	Colour	Order Code	Price Each			
			5+	25+	100+	250+
Through Hole - Horizontal						
23mm Coin Cell	Black	206-4714	0.33	0.29	0.26	0.21
20mm Coin Cell	Black	206-4715	0.32	0.28	0.25	0.20
24mm Coin Cell	Black	206-4717	0.42	0.38	0.35	0.27
20mm Coin Cell	Black	206-4719	0.47	0.43	0.39	0.33
12mm Coin Cell	Black	206-4720	0.39	0.36	0.33	0.26
12mm Coin Cell	Black	206-4721	0.41	0.37	0.34	0.27
20mm Coin Cell	White	206-4726	0.39	0.36	0.33	0.26
Through Hole - Vertical						
20mm Coin Cell	Black	206-4718	0.44	0.41	0.37	0.29
Surface Mount						
12mm Coin Cell	Black	206-4722	0.52	0.47	0.43	0.36
20mm Coin Cell	Black	206-4723	0.59	0.54	0.48	0.40
20mm Coin Cell	Black	206-4724	0.32	0.28	0.25	0.20
20mm Coin Cell	White	206-4725	0.37	0.34	0.29	0.23

Single/Multicell



A range of general purpose battery holders moulded in black plastic suitable for project work.

Note: Not suitable for use with nickel cadmium cells or for industrial applications

Can Style	Connection	W	D	H	Order Code
AA	Wire Leads	56	16	13	118-3113
AA	Wire Leads	58	25	17	118-3115
AA	Snap terminals	56	25	17	118-3116
AA	Snap terminals	60	30	28	118-3117
AA	Snap terminals	58	29	63	118-3118
C	Snap terminals	60	53	21	118-3119
C	Snap terminals	108	53	23	118-3120
D	Through Hole	69	36	27	118-3121
D	Snap terminals	68	68	30	118-3122

685512

5 Per Pack		Price Per Pack		
Can Style	Order Code	1+	5+	20+
AA	118-3113	2.02	1.71	1.53
AA	118-3115	2.63	2.29	2.04
2 x AA	118-3116	2.29	2.03	1.79
4 x AA	118-3117	2.76	2.40	2.16
8 x AA	118-3118	6.84	6.65	6.03
2 x C	118-3119	4.46	3.93	3.45
4 x C	118-3120	5.22	4.58	4.12
1 x D	118-3121	2.66	2.32	2.09
2 x D	118-3122	4.21	3.67	3.29

Snap-On



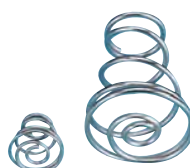
Snap-on connector for use with PP3 and PP6 batteries.
Type 1 replaces the BH9 connector.
Type 2 has a rigid plastic housing with strain relief.

Type 1 Lead length = 150 Type 2

685513

10 Per Pack		Price Per Pack		
Type	Order Code	1+	25+	100+
1	118-3123	6.23	4.97	4.27
2	118-3124	5.46	4.76	3.50

Spring Contacts



- Nickel plated steel spring contacts
- Economical and reliable
- Available in 2 sizes
- Sold in packs of 10

685514

10 Per Pack		Price Per Pack		
	Order Code	1+	5+	10+
AA/A	326-0938	0.93	0.89	0.87
C/D	326-0940	1.63	1.59	1.57



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- Potentiometers
- Connectors
- Semiconductors
- LEDs

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- Test Equipment
- Cable and Wiring
- Soldering stations
- Tools

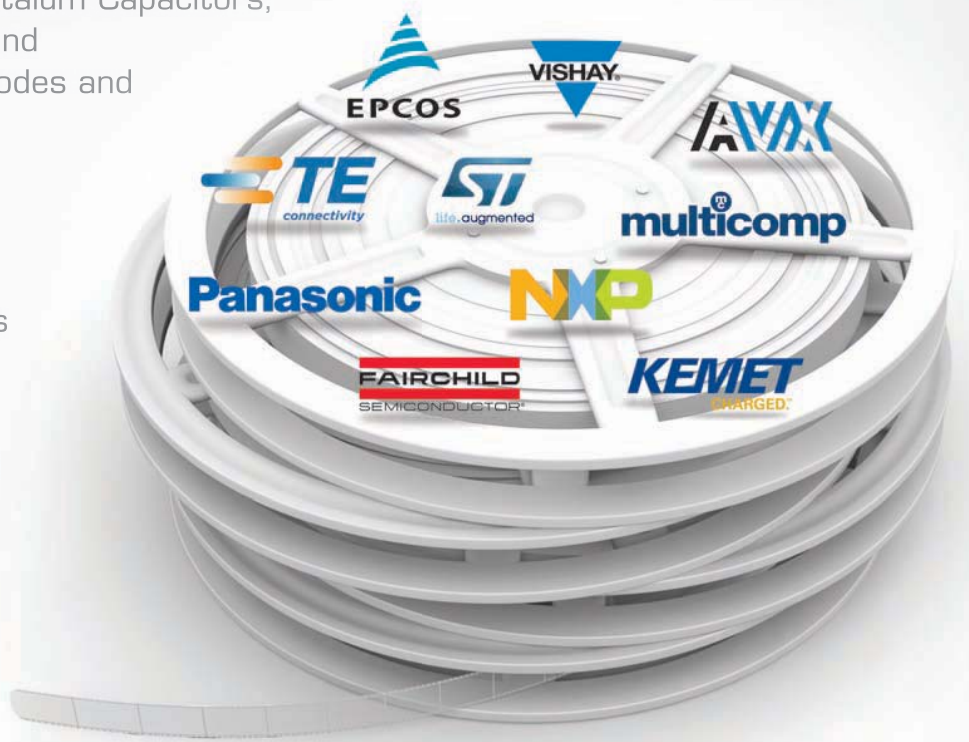


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